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Learning DOS & Windows®

DOS versions 5-6.22
Windows 3.1

Fast Teach

Step-by-step concepts, exercises, keystrokes & applications

Margaret Brown

DDC Publishing

DDC®

Learning DOS & Windows®

DOS versions 5-6.22
Windows 3.1

Margaret Brown

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TO MY FAMILY Larry, Sheldon, Sheila, and Miles

Thank you for your love, patience, and caring.

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About This Book

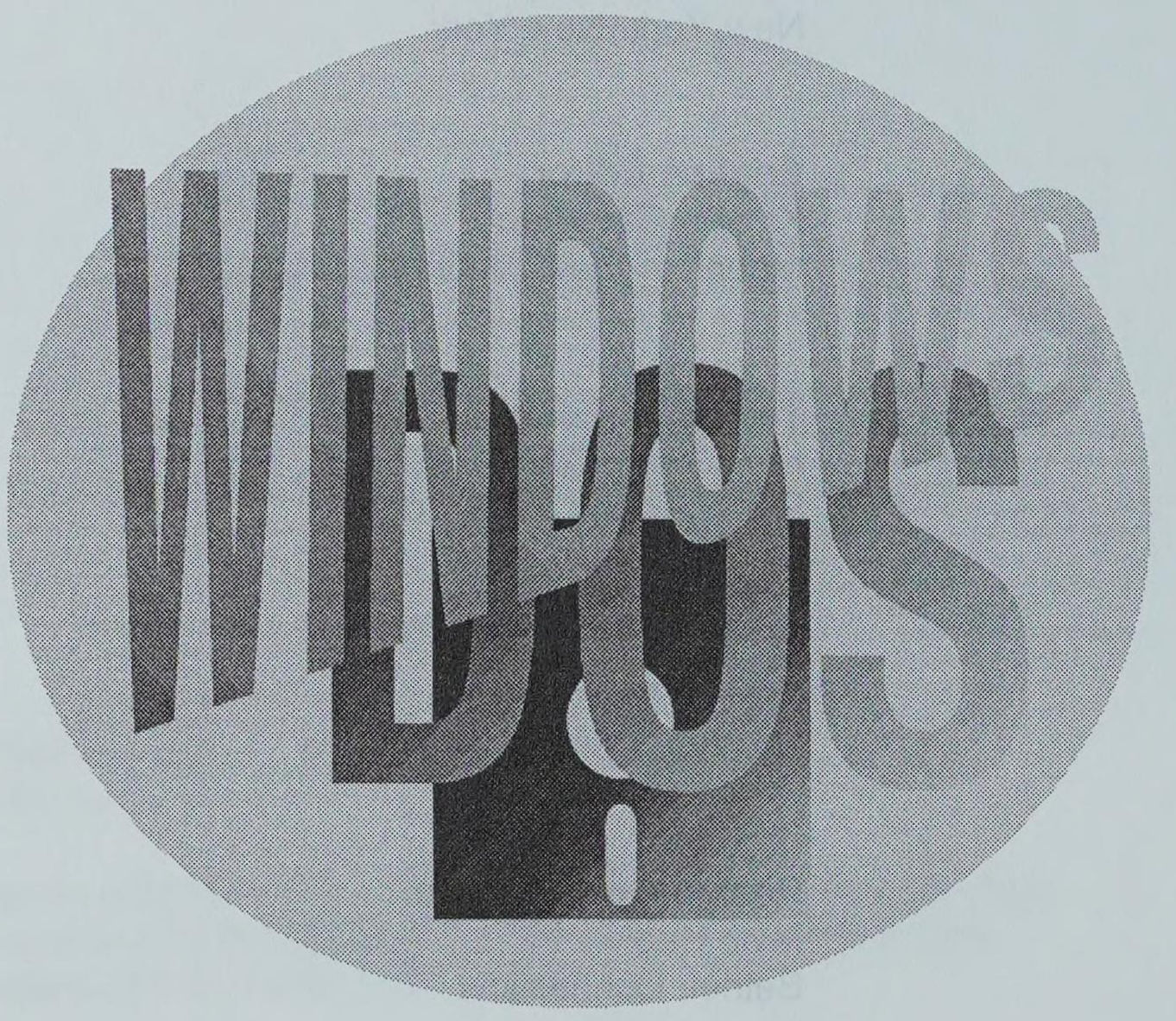
Learning DOS and Windows introduces you to DOS 5 & 6 and Windows 3.1 by:

- simplifying terms and concepts in brief topics
- providing short, task-oriented, step-by-step exercises
- providing reinforcing practice exercises at the end of each lesson
- providing reinforcing worksheets at the end of each lesson

The book is divided into two sections. Because the sections differ slightly, they are each explained separately in

About Section I — DOS 5 & 6 *(page vi)* and

About Section II — Windows 3.1 *(page viii)*.



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About Section I — DOS 5 & 6

Section I — DOS 5 & 6 introduces you to the most common DOS commands and tasks; those which will get you up and running with DOS. This section walks you through each new DOS command or task one at a time, step by step, omitting unnecessary DOS jargon. **Section I** contains five lessons with 12 topics, 52 exercises, and 20 worksheets.

Learning Disk

At the heart of the DOS section is the *Learning Disk* that accompanies the book. Using DOS commands, you will quickly learn to manipulate the files and directories contained on the *Learning Disk*. With the *Learning Disk*, you will learn hard disk management concepts from the safety of a floppy disk.

Lessons

- Lessons consist mostly of short, task-oriented, step-by-step **exercises**.
- Some lessons contain short **topics** that teach basic DOS concepts.
- **Practice exercises** at the end of each lesson review and repeat the concepts covered in the lesson.
- Reinforcing **worksheets** at the end of each lesson review DOS terms, concepts and commands.

Exercises

- Each exercise performs a DOS command or task.
- Each DOS command or task is defined.
- Each exercise lists objectives.
- Exercise instructions are shown in the main page.
- Exercise steps are clearly numbered.
- Results of exercise steps are explained and/or illustrated where appropriate.
- Occasional notes explain concepts within the exercise steps.
- Tasks that are reviewed often refer to specific pages for more information.
- New terms are defined in the side column.
- Warnings, important comments, and notes appear in the side column when needed.
- "STEPS to" in the side column list the *general* steps in the side column to perform the exercise command or task.

Exercise Results

The results of exercise steps are explained and/or illustrated immediately after a command so you have instant feedback. To conserve space when illustrating the results, unimportant portions are sometimes omitted. A series of X's in a *result* indicates data in a result that may be different on your system.

Solutions

- Appendix E provides *solutions* for a few exercise steps that have sizable review sections,
- Appendix F provides *solutions* to the Practice Exercises, and
- Appendix M provides *solutions* to the Worksheets.

Assumptions

- It is assumed that you can provide a blank disk that matches the Learning Disk in size and density.
- It is assumed that your computer has a *hard disk* which it is named C:.
- It is assumed that your computer has DOS 5 or DOS 6 installed correctly on drive C:.
- It is assumed that the path to the DOS directory is in the PATH statement of your AUTOEXEC.BAT file.

If your system is different than these assumptions, you need to make appropriate accommodations.

Conventions

- Exercise names shown in upper case identify DOS commands, while those in lower case denote DOS tasks.
- Every action in the exercises starts with a bullet (•) and a **bold** action word.
- Commands that you type in exercises are shown in upper case for consistency and easy identification. (You can use either uppercase or lowercase letters, or a combination when issuing DOS commands.)
- Filenames and directory names are shown in upper case in the DOS section of this book.
- ↵ refers to the **Enter** key.
- Keys that should be pressed together have a plus (+) between them. For example, Ctrl + →.
- Keys that should be pressed in succession are separated by commas. For example, Alt, F, X.

Read Me!

About the Learning Disk

- The Learning Disk that comes with this book should fit in your computer's disk drive A:.
- The disk that comes with this book is a *high density* 3½" disk (1.44MB) (unless you ordered this book directly from DDC Publishing and indicate the disk size you require).
- However, if your system has a high density disk drive B: that is 3½", you can use the 3½" Learning Disk in disk drive B: if you remember to substitute disk drive B: for disk drive A: every time the book refers to disk drive A:.
- If disk drive A: on your computer system is a 5¼", you will be sent a free 5¼" Learning Disk if you call this toll-free number: (800) 528-3897.

  OR
- Appendix H has instructions to make a 5¼" Learning Disk by using your 3½" Learning Disk, IF your computer system has a 5¼" disk drive A: and a 3½" disk drive.
- In Lesson Three you will need to provide a blank disk that matches the Learning Disk in size and density.

Reference material

Learning DOS can be used as a reference when you complete it. You can look up the task you want to perform, review it if needed, and then apply the general *STEPS to* perform DOS tasks to your specific situation. The appendixes offer different ways to reference DOS.

Quick Reference Guide. DDC Publishing publishes a **Quick Reference Guide for MS-DOS 5** and **Quick Reference Guide for MS-DOS 6** both by Karl Schwartz. These reference guides are designed to help you master DOS commands without searching through lengthy manuals. Step-by-step directions show you how to perform DOS procedures. These *Quick Reference Guides* are good companion books for **Learning DOS and Windows** Look for DDC Quick Reference Guides in bookstores or call DDC at (800)528-3897).

About Section II — Windows 3.1

Section II — Windows 3.1 introduces you to Windows by simplifying terms and concepts; by furnishing frequent reinforcing worksheets; and by providing short, task-oriented, step-by-step exercises. **Section II** contains five lessons with 16 topics, 62 Exercises, and 26 Worksheets.

Groups of Exercises

Some groups of exercises should be done during the same session. This is noted immediately under the "task name" in the narrow column when appropriate.

"OR" Boxes

"OR" boxes are occasionally used in the lessons. They are faintly dotted boxes around different directions that perform the same action. Do *only one* option when you come to "OR" boxes.

Hands-On Exercises

- Each exercise performs a task.
- Each task is defined.
- New terms are defined.
- New Windows elements are pointed out.
- Frequent illustrations show what is happening on your screen.
- Exercise instructions are shown in the wide column.
- Exercise steps are clearly numbered.
- Exercise instructions usually use the mouse.
- Keyboard instructions are included in the narrow column.
- Tasks that are reviewed often have referring page numbers.
- Notes explain more about the exercise.
- Assumptions, warnings, important comments, and notes appear in the narrow column when needed.

Lesson Reviews

A review of Windows concepts covered in each lesson is provided at the end of the lesson.

Solutions to Worksheets

Appendix N contains answers to the 26 worksheets in section II.

Read Me!

Windows provides a wonderfully changeable environment. With a little exposure to Windows, you will become familiar with this easily manipulated graphics environment, and you will discover how to customize Windows to meet your needs. At first, you may be a little confused as you see windows and icons moving around quickly and sometimes disappearing. If you are used to a stable computer atmosphere, the changeable Windows environment may take some getting used to. As you become acquainted with the many varied aspects of Windows, you will find it easy to use, convenient, practical, and fun.

Follow Directions Precisely

The *starting Windows screen* can be easily altered by mistake or by experimenting. If Windows is being used in a training environment, remember that other people have to use the program and that a consistent environment is important for working through lessons in this book. Therefore, *it is recommended that you follow the exercise directions as precisely as possible*.

Common Problems and Solutions

Several common errors, and solutions to correct them, are covered in Appendix K.

Back-Up and Copy the Original .INI and .GRP Files

It is easy to create a messed-up desktop. If this happens, you will be thankful to have an opportunity to return the *starting Windows screen* to its original state. Two processes are offered to help return the *starting Windows screen* to its original condition. Appendix J has instructions to "Reproduce the Original Windows Desktop," and Appendix I has instructions to "Rebuild Group Windows." It is best to perform the instructions to "Reproduce the Original Windows Desktop" when the program is newly installed or as soon afterwards as possible.

Windows Program Differences May Occur

Microsoft has licensed some companies to sell their own customized versions of Windows, thereby creating slight differences in the Windows program that the various vendors provide. Although this book anticipates many different possible conditions, program differences may cause some unanticipated results when doing the exercises in this book.

Where Can I Get Additional Reference Material for Windows 3.1?

DDC Publising publishes the **Quick Reference Guide for Microsoft Windows 3.1** by Karl and Joanne Schwartz. This reference guide is designed to help you master any Windows operation without searching through lengthy manuals. Step-by-step instructions show how to perform Windows procedures. Look for it in bookstores or call DDC at (800)528-3897 to order it.

Do the Windows Tutorial First!

The Windows tutorial is short and well done. It will help you become familiar with basic Windows commands in a way that prevents accidental actions that may easily occur in the real program. For a better understanding of concepts, you should complete the Windows Tutorial before you continue with this book.

If you are new at using a mouse,
DO THE MOUSE LESSON:

1. Start Windows, if it is not already started (page 52).
2. Press and hold Alt while you tap H (Help), then release Alt.
   The Help drop-down menu should appear.
3. Press W (Windows Tutorial).
   The Windows Tutorial program starts.
4. Press M (Mouse).
   The mouse lesson starts.
5. Read the information and follow directions to complete the tutorial.

   *NOTE: If the left mouse button does not work correctly, it may have been changed in the Mouse Lesson of the Windows Tutorial. The default setting for the mouse button is **R** (for right-handed users). The **R** default means that the left mouse button is used for **clicking**, **double-clicking**, and **dragging** (most of the time). You can change it back to the default from the Mouse Lesson. Select Help, Windows Tutorial, then **M**(ouse Lesson). Select **R** when given the opportunity, and then either exit the tutorial or continue with the lesson.*

DO THE WINDOWS BASICS LESSON:

1. Start Windows, if it is not already started (page 52).
2. Either click on Help (on the menu bar) OR press and hold Alt while you press H (Help), then release Alt.
   the Help drop-down menu should appear.
3. Either click on Windows Tutorial OR press W (Windows Tutorial).
   The Windows Tutorial program starts.
4. Press W (Windows Basics lesson).
   The Windows Basics lesson starts.
5. Read the information and follow directions to complete the tutorial.

TO QUIT AT ANY TIME AND RETURN TO THE PROGRAM:

1. Press Esc.
2. Press Y (Yes).

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DOS Lesson One
Getting Started

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TOPIC 1
Computer System, Hardware

OBJECTIVE:

- identify and define the hardware parts of your computer system

– Terms and Notes –

hardware
The group of parts that make up the computer system. Hardware can be seen and touched.

computer
An electronic device that performs complex tasks at high speed and with great accuracy. There are two main parts of a computer—the *processor* and the *memory*.

processor (CPU)
The part of the computer that processes the instructions that are in memory.

memory (RAM)
The area of the computer that holds instructions (programs) and information you give it. When you turn the computer off, everything in RAM disappears.

read-only memory (ROM)
A chip that holds information that cannot be changed.

disk drive
A mechanical device that you use to transfer information back and forth between **memory** and a disk.

floppy disk
A magnetically coated disk on which information can be stored and retrieved. Floppy disks are inserted into and removed from the floppy disk drive.

hard disk
A large-capacity storage area that offers fast access to store and retrieve information. The hard disk is enclosed in a unit that you do not handle.

monitor
A screen that displays the information in the computer. Also called *display screen*, or *video display terminal* (VDT).

keyboard
A device that is used to enter data into and issue commands to the computer.

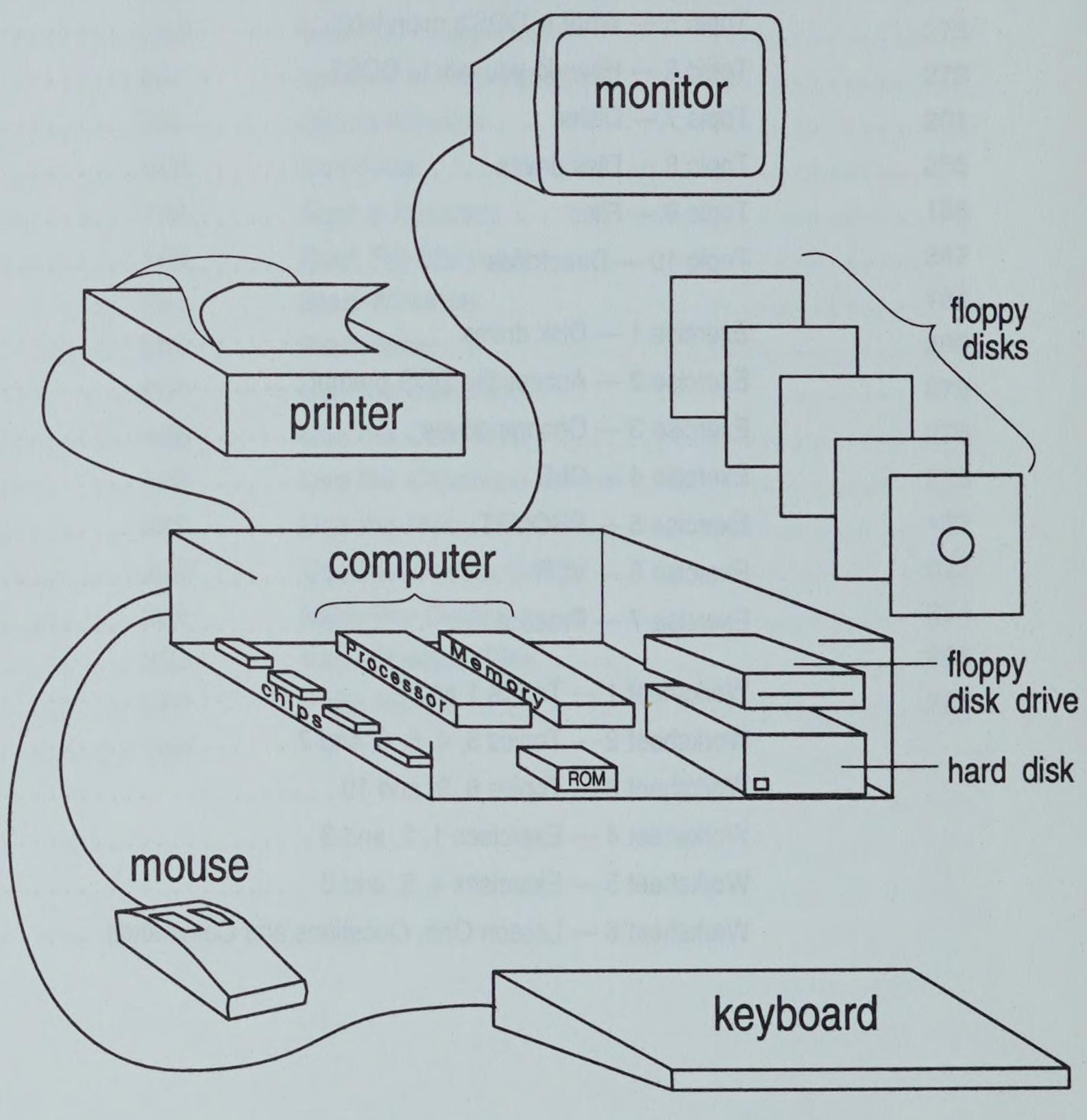
printer
A device that makes a hard copy of data in the computer.

mouse
A small, hand-held device you use to control a pointer on the screen.

Your computer's hardware system

The computer system is your assistant. It has its own
- brain (**processor** or *central processing unit—CPU*),
- workspace (**memory** or *random access memory—RAM*),
- built-in instructions (**read-only memory chips**—*ROM*),
- file cabinets (**disk drives**), and
- storage medium (**hard disk** and **floppy diskettes**).

Your computer comes with a
- **monitor** (to show you what is going on),
- **printer** (to **print copies** of documents),
- **keyboard** (so you can enter **commands** and **data**), and a
- **mouse** (so you can control a pointer on the screen).



Typical Computer System

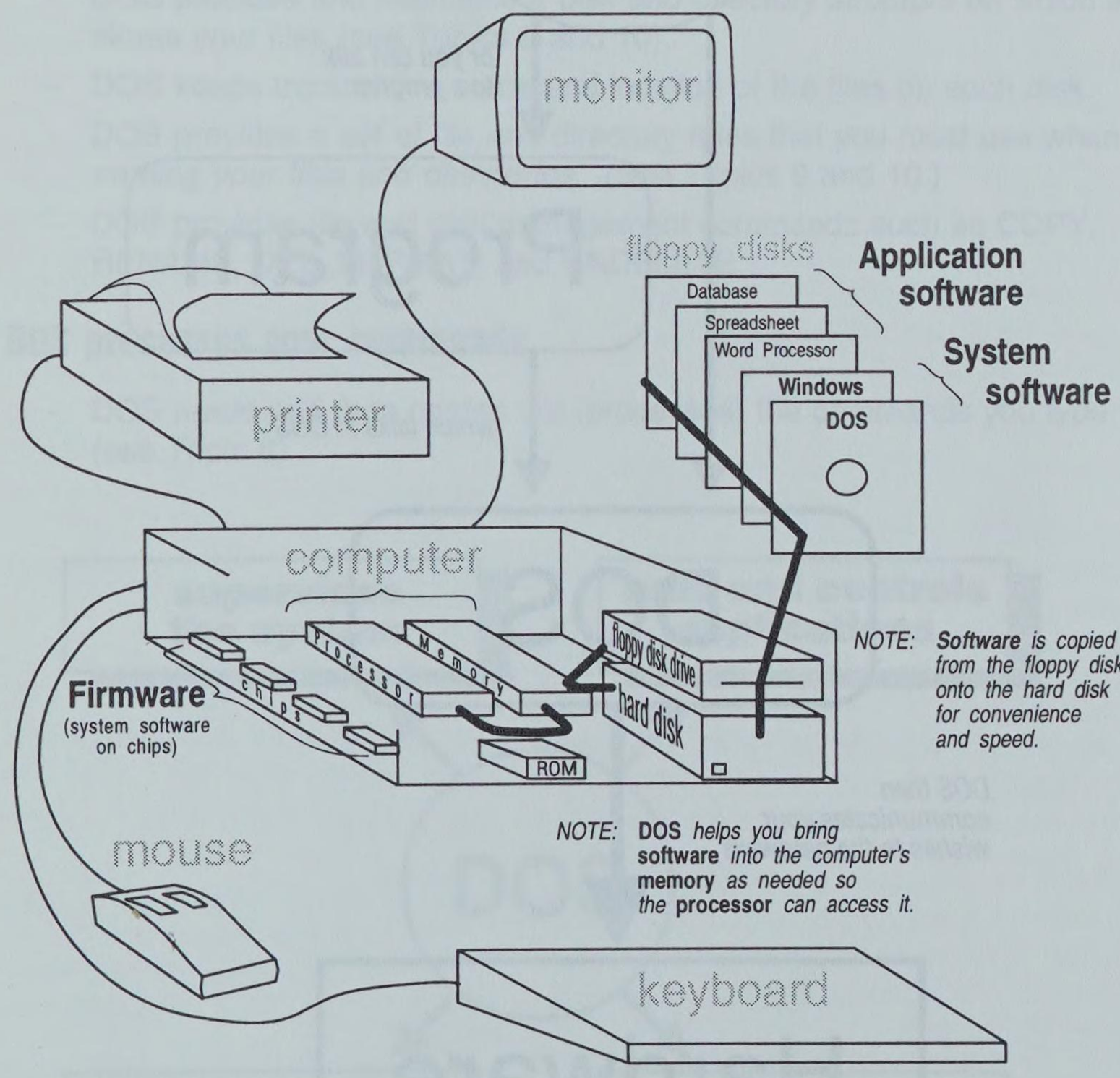
What runs your computer system?

Your assistant is missing something, however. Its **memory** is empty. The computer can do nothing until it is given instructions—**software**. **Software** is a *set of instructions* that tells the computer what to do. There are two main kinds of **software**:

- *application software* (programs) and
- *system software* (firmware and DOS – Disk Operating System).

Software is an essential part of your computer system, and **DOS** is the *most important* **software**. **DOS** controls all the parts of the computer system (more about DOS in the next few sections).

While **software** (including DOS) comes on **floppy disks** originally, this book assumes that your computer system has **DOS** and some programs already copied onto the hard disk.



NOTE: ***Software*** *is copied from the floppy disks onto the hard disk for convenience and speed.*

NOTE: **DOS** *helps you bring* **software** *into the computer's* **memory** *as needed so the* **processor** *can access it.*

Typical Computer System, software

TOPIC 2
Computer System, Software

OBJECTIVES:

- identify software
- identify two main kinds of software
- identify DOS (Disk Operating System)

– Terms and Notes –

software
Instructions that tell your computer how to perform a task. Software is stored on disks in program files (see Topic 9). Software cannot be seen or touched. There are two main kinds of software:

- *application software* and
- *system software.*

application software (program)
Software that does a specific task, such as word processing.

system software
Software that runs the computer system.

firmware
System software that is built into the computer system on ROM chips.

DOS (Disk Operating System)
A special kind of *system software* that is stored on the hard disk. DOS acts as a link between *application software* and the computer's hardware. **DOS** must be in the computer's memory before *application software* can be used. DOS performs many basic tasks such as disk and file management.

TOPIC 3
What is DOS?

OBJECTIVE:

- identify how DOS connects the parts of the computer system, including you (the user), programs, and hardware

– Terms and Notes –

you (user)
The controller of the computer system (its software and hardware).

program
A set of instructions that your computer carries out to perform a specific task, such as word processing.

DOS
System software that links you and your programs to the computer's hardware.

hardware
The physical parts of your computer system – processor, memory, disks, disk drives, keyboard, monitor, etc.

NOTE: You can use your computer without knowing much about DOS, because the programs you use are written with instructions on how to talk to DOS. However, in this book, you will learn how to talk to DOS directly.

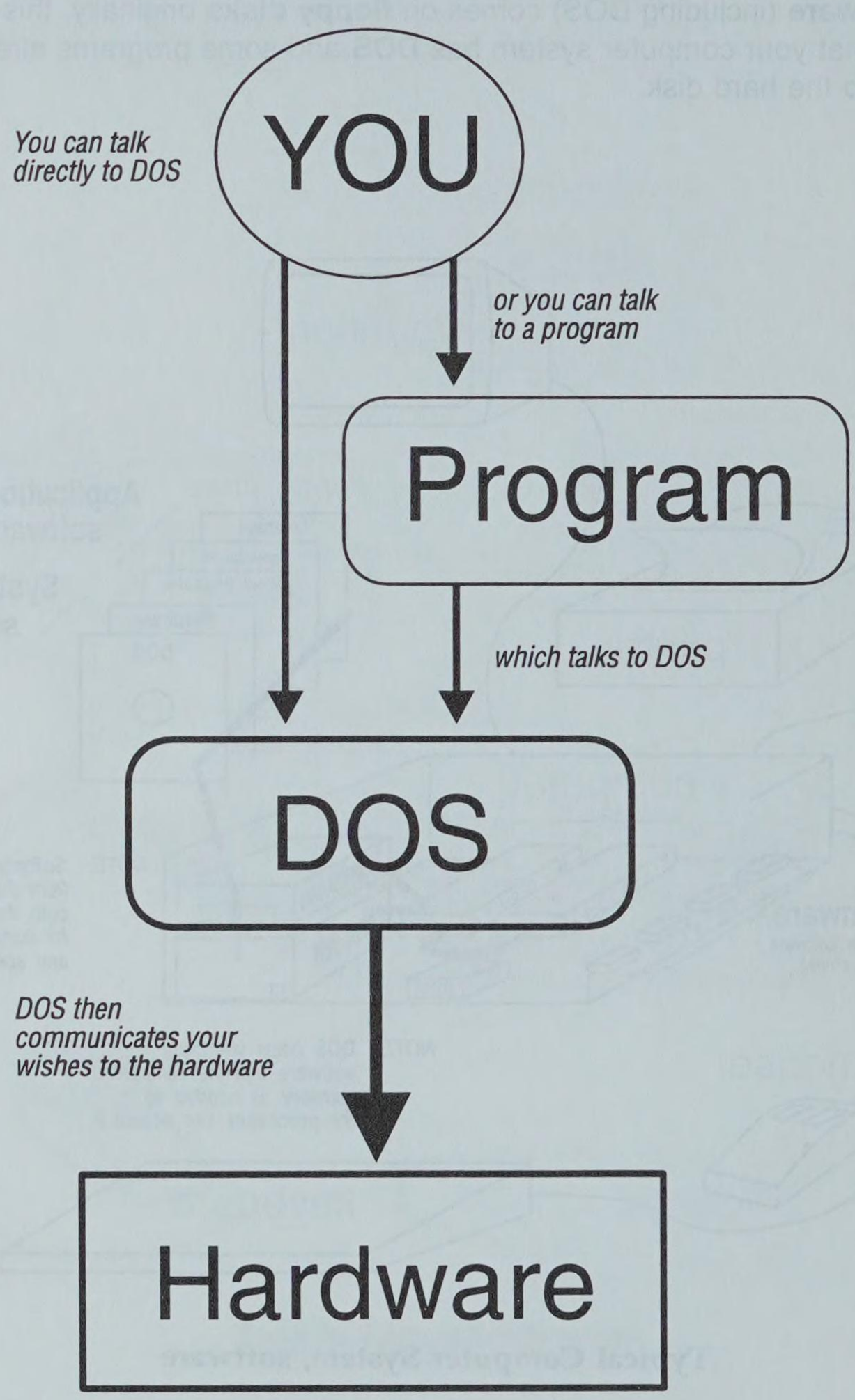
NOTE: Programs sometimes send commands directly to your hardware without your direct command.

DOS is the link between you and your computer

DOS is *system software* that acts as a link between you (or a program) and **hardware**.

DOS (rhymes with toss) stands for *Disk Operating System.* The most popular **DOS** today is **MS-DOS®** (Microsoft Disk Operating System). **PC-DOS®** is an IBM® version of **DOS**. Some other computers have their own version of DOS also. MS-DOS and PC-DOS, as well as some other versions of DOS, run on IBM and IBM-compatible personal computers.

You can talk either directly to **DOS** or to a **program** which talks to **DOS**. **DOS** then passes your wishes on to the **hardware**.



DOS supervises your computer system

- DOS supervises all of your computer's devices such as memory, disk drives, the monitor, the keyboard, and the system clock.
- DOS watches these devices for events, such as typing at the keyboard.
- DOS also reports problems (as error messages) it encounters with devices, such as when there is no room in memory for a program or when the surface of a disk is defective.

DOS runs and controls your applications

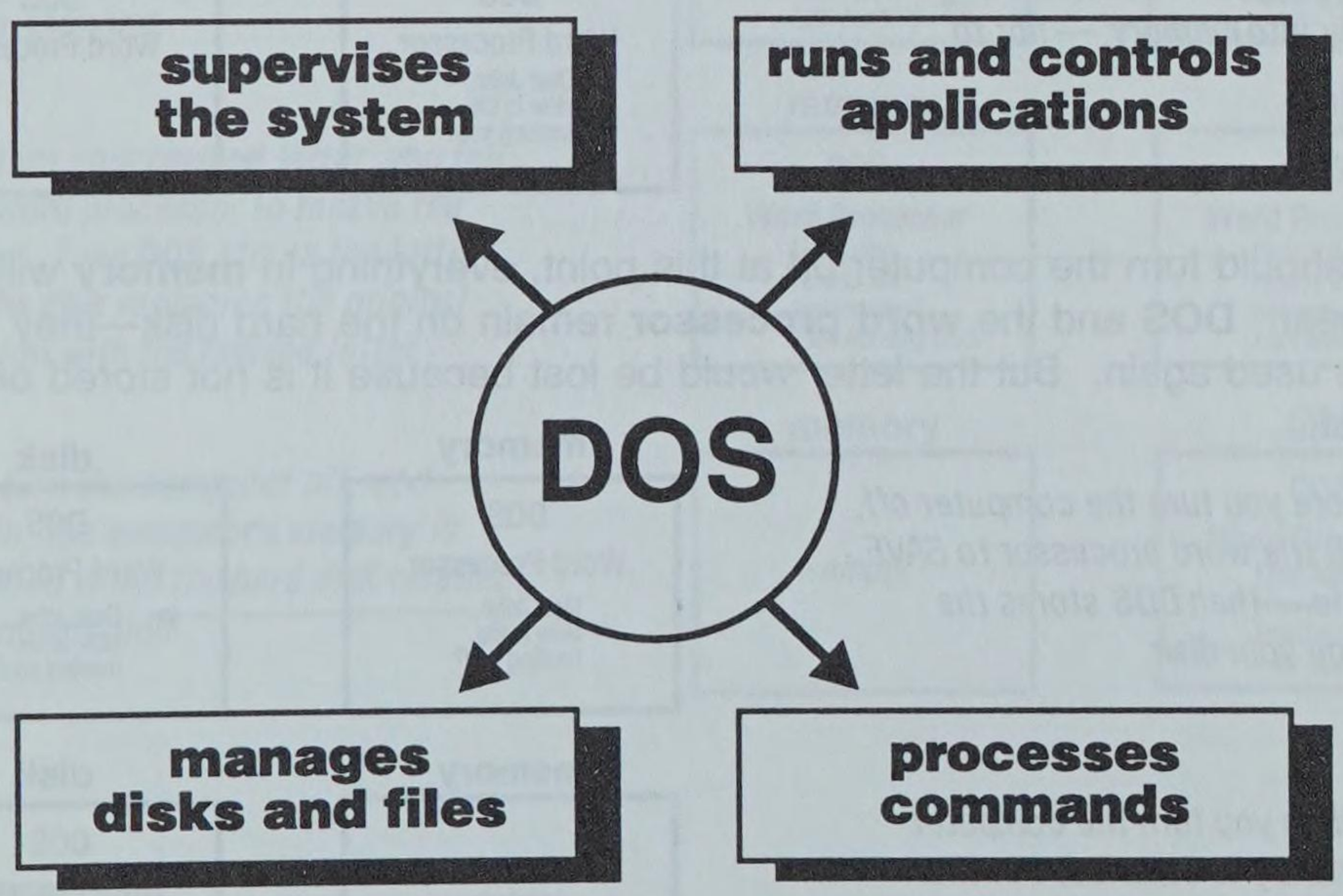
- DOS *loads* and runs your applications such as a word processor when you enter the application's name (see Topic 6).
- DOS manages memory use while programs are running.
- DOS saves and retrieves your data files for your programs.

DOS manages your disks and files

- DOS provides and maintains a *disk and directory structure* on which it stores your files (see Topics 9 and 10).
- DOS keeps track of the name and location of the files on each disk.
- DOS provides a set of file and directory rules that you must use when *naming your files and directories*. (See Topics 9 and 10.)
- DOS provides file and disk management commands such as COPY, RENAME, DEL, FORMAT, and UNDELETE.

DOS processes your commands

- DOS reads and then carries out (processes) the commands you type (see Topic 6).



TOPIC 4 What Does DOS Do?

OBJECTIVE:

- identify the four kinds of tasks that DOS performs

– Terms and Notes –

loading applications
When you type the name of a program at the DOS prompt, DOS looks for that program file on your disk. If DOS finds the program file, it copies (loads) it into memory and starts the program.

disk and directory structure
A file storage system that provides for the creation of directories for the organization of files on disks.

NOTE: The DOS rules for naming files and directories are common to all the applications you will use.

NOTE: You will discover that most DOS commands have one of two primary purposes:

- file management
- disk and directory management

TOPIC 5
What is DOS's Main Job?

OBJECTIVE:

- identify how DOS moves information and programs between *memory* and a *disk* (in this example, the hard disk)

– Terms and Notes –

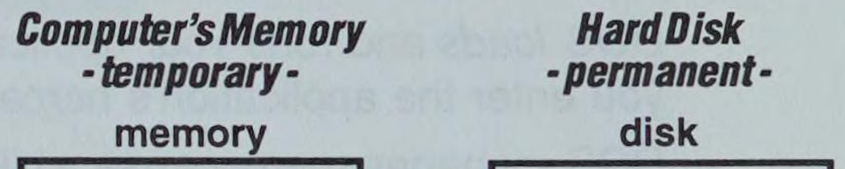
booting
To begin the computer's start-up process, and load DOS into the computer's memory.

Moving data between memory and a disk

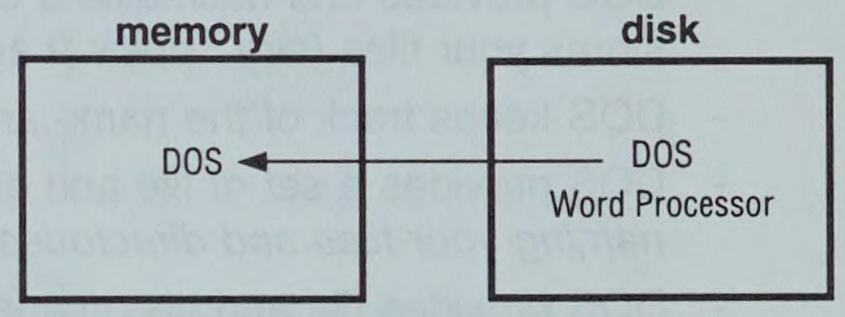
One of **DOS**'s most important jobs is to *move information* back and forth between the **computer's memory** and **disks**. Everything you use in the computer has to be in the **computer's memory**.

The **computer's memory** is called *temporary memory* because when you turn the computer off, everything in the **computer's memory** is lost. **Disks** are called *permanent storage* because when you turn the computer off, information on **disks** stays there.

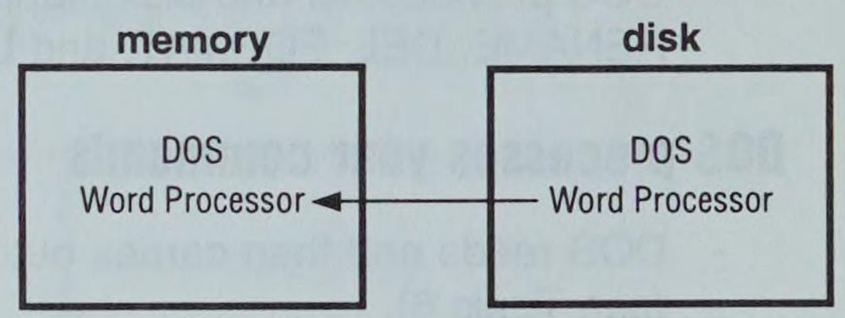
*With the computer off, the **computer's memory** is empty, but the **hard disk** has information stored on it — **DOS** and a **word processor.***



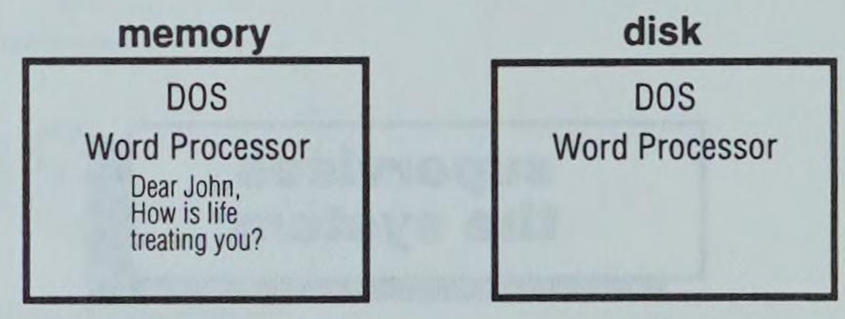
*When you turn the computer on, DOS is automatically loaded into **memory**. This is called **booting** the computer.*



*If you decide to use the word processor, you tell **DOS** to load the word processor's instructions into **memory.***

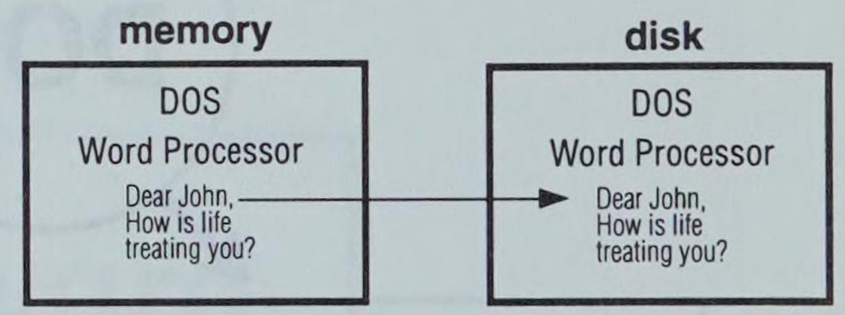


*When you type a letter, it will go directly into **memory** — not to a **disk**.*



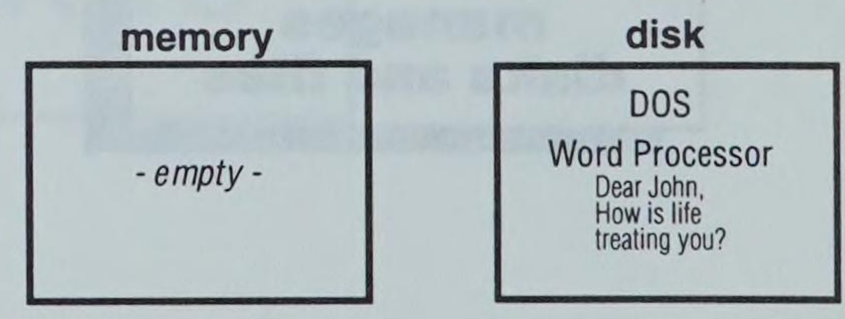
If you should turn the computer off at this point, everything in **memory** will disappear. **DOS** and the **word processor** remain on the hard disk—they can be used again. But the letter would be lost because it is not stored on the **disk**.

*So before you turn the computer off, you tell the word processor to SAVE your file —then **DOS** stores the letter on your **disk**.*



*Now when you turn the computer off, **memory** is emptied, but the information on the **disk** remains.*

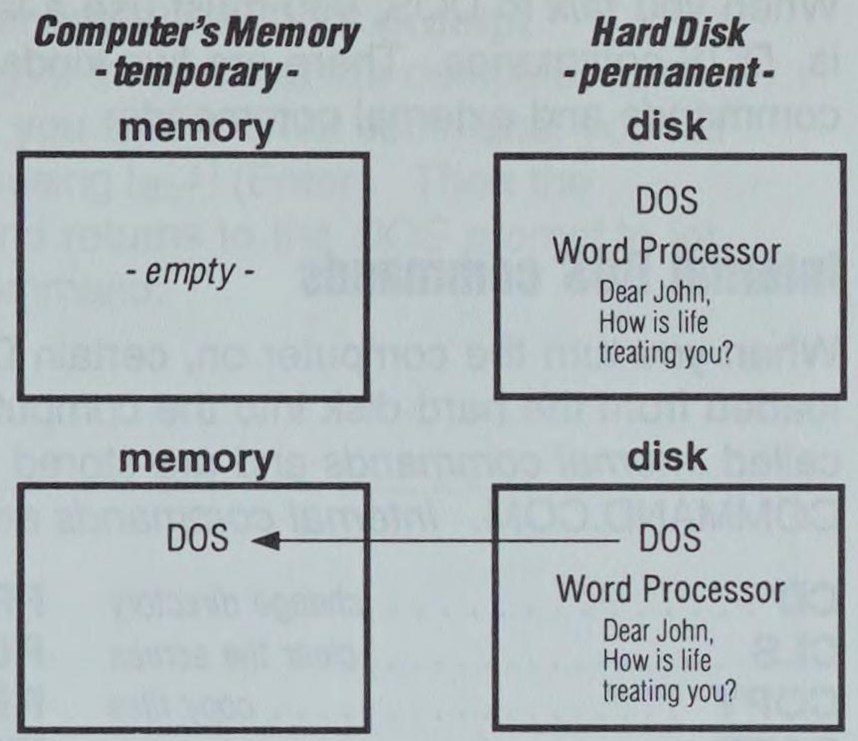
***NOTE:** Your letter is stored on the hard disk as a file (see Topic X).*



Topic 5 continued...

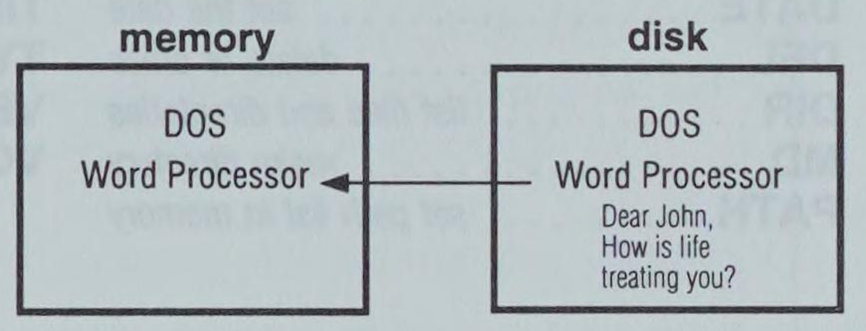
You decide to make some changes to the letter:

*The computer is off — **memory** is empty, but the **hard disk** has **DOS**, a **word processor**, and your **letter** on*

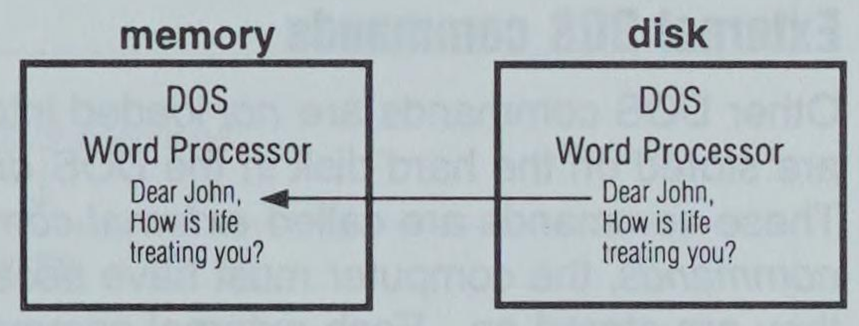


*You turn the computer on, and again, **DOS** is automatically loaded into **memory**.*

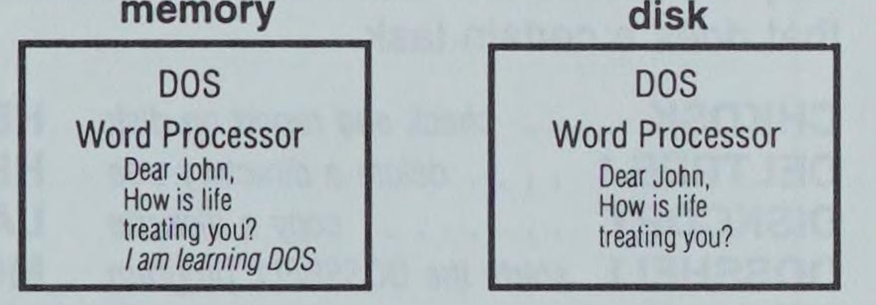
*You tell **DOS** to load the **word processor's** instructions into **memory**.*



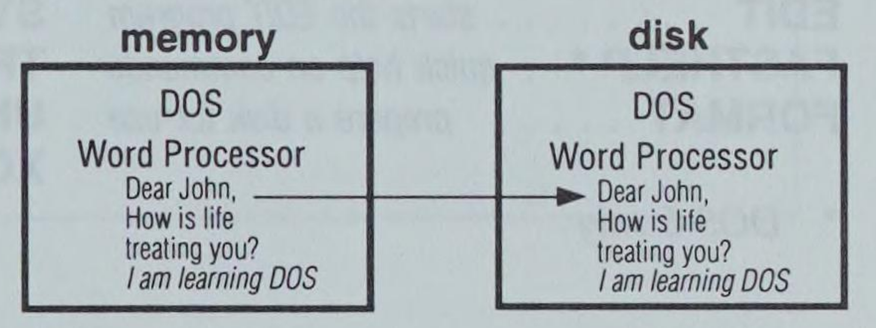
*You tell the word processor to retrieve a copy of your **letter**— then **DOS** moves a copy of the file into memory.*



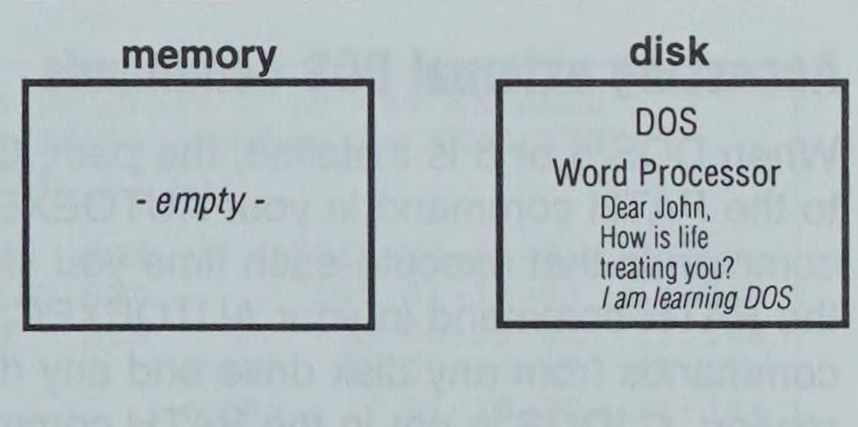
*The changes you make to the letter take place in **memory**, but not on the **disk**. Your original letter, stored on the disk, has not been changed.*



*To store your **revised** letter, you tell the word processor to resave the letter. Then **DOS** stores the letter on the **disk** replacing the original version with the **revised** letter.*



*You turn the computer off, and again, the **computer's memory** is emptied while the **hard disk** retains its information.*



NOTE: When you retrieve information from the hard disk, **DOS** copies the information to **memory** leaving the information unchanged on the **hard disk**.

TOPIC 6
How Do You Talk to DOS?

OBJECTIVES:

- identify DOS commands
- identify internal DOS commands
- identify external DOS commands
- identify the DOS prompt and how you use it to issue commands to DOS

– Terms and Notes –

DOS command
A command that tells DOS to carry out a specific action such as list files on a disk.

internal commands
DOS commands that are stored in a file called COMMAND.COM and automatically loaded into the computer's memory. Because they reside in memory, you can execute internal commands at any time.

external commands
DOS commands that are stored in a file and that are accessible only if they can be reached on the disk and directory in which they are stored.

NOTE: The lists of DOS commands on this page show only the **internal** and **external** commands used in this book. For a complete list of DOS commands, see Appendix A.

How do you talk to DOS?

When you *talk* to DOS, you must use a language that DOS understands, that is, *DOS commands*. There are two kinds of DOS commands: internal commands and external commands.

Internal DOS commands

When you turn the computer on, certain DOS commands are automatically loaded from the hard disk into the computer's memory. These commands are called *internal commands* and are stored in a *file* (see Topic 9) called COMMAND.COM. *Internal commands* are always available.

CD . . . . . *change directory*
CLS . . . . . *clear the screen*
COPY . . . . . *copy files*
DATE . . . . . *set the date*
DEL . . . . . *delete or erase*
DIR . . . . . *list files and directories*
MD . . . . . *make directory*
PATH . . . . . *set path list in memory*
PROMPT . . . . . *change DOS prompt*
RD . . . . . *remove directory*
REN . . . . . *rename a file*
TIME . . . . . *set the time*
TYPE . . . . . *show the contents of a file*
VER . . . . . *display the DOS version*
VOL . . . . . *display disk's volume name*

External DOS commands

Other DOS commands are *not* loaded into the computer's memory, but are stored on the hard disk in the DOS *directory* (see Topic 10). These commands are called *external commands*. In order to use *external commands*, the computer must have access to the disk and directory that they are stored on. Each external command is actually a little program that does a certain task.

CHKDSK . . . . *check and report on disk*
DELTREE * . . . . *delete a directory tree*
DISKCOPY . . . . . *copy a diskette*
DOSSHELL *starts the DOSSHELL program*
EDIT . . . . . *starts the EDIT program*
FASTHELP * . *quick help on commands*
FORMAT . . . . . *prepare a disk for use*
HELP . . . . *DOS 5 - quick help on commands*
HELP * . . *DOS 6 - starts the HELP program*
LABEL . . . . . *name a disk*
MOVE *move files or rename directory
SYS . . . . . *create a system disk*
TREE . . . . . *list all directories*
UNDELETE . . . . . *restore deleted files*
XCOPY . . . . *copy directories and their files*

* *DOS 6 only*

Accessing external DOS commands

When DOS 5 or 6 is installed, the *path*, **C:\DOS**, is automatically added to the PATH command in your AUTOEXEC.BAT file (a file containing commands that execute each time you start your computer). If **C:\DOS** is in the PATH command in your AUTOEXEC.BAT file, you can access *external* commands from any disk drive and any directory. However, if for some reason, **C:\DOS** is not in the PATH command in your AUTOEXEC.BAT file, then you must point DOS to the DOS directory on the hard disk whenever you use *external* commands. (The next four topics examine *disks*, *disk drives*, *files*, and *directories*.)

Topic 6 continued...

Telling DOS what to do

You tell DOS what to do by typing a command at the **DOS prompt** (C:>\). When the *DOS prompt* is showing, it means that the computer is waiting for you to tell it what to do. After you type a *DOS command*, you tell the computer that you are through by pressing ↵ (Enter). Then the computer performs the *DOS command* and returns to the *DOS prompt* to let you know that it is ready for your next command.

DOS prompt ↓

```
C:\>
```

The computer is waiting for you to tell it what to do.

DOS command ↓

```
C:\> DIR
```

You type a command, for example, ***DIR****, then press ↵ (to tell the computer that you are through).*

```
Volume in drive C is 486 EXPRESS
Volume Serial Number is XXXX-XXXX
Directory of C:\

COMMAND  COM     47845 04-09-91   5:00a
AUTOEXEC BAT       105 01-14-93   6:04p
CONFIG   SYS        75 06-26-92  11:16a
DOS            <DIR>     01-16-92  11:13a
LOTUS          <DIR>     01-16-92  11:34a
WINDOWS        <DIR>     06-26-92  10:55a
WP51           <DIR>     01-16-92  11:36a
MOUSE          <DIR>     01-16-92  11:55a
TYPE           <DIR>     01-13-93   8:52a
       11 file(s)     109612 bytes
                     4978688 bytes free
C:\>
```

The computer does what you ask (lists the files and directories on the disk) and returns to the system prompt to let you know that it is waiting for your next command.

↑ *DOS prompt*

DOS prompt
The signal that the computer is waiting for you to tell it what to do.

TOPIC 7
Disks

OBJECTIVES:

- identify two kinds of disks
- identify floppy disk sizes, densities, and capacities
- identify other differences in floppy disks

– Terms and Notes –

disks
Media on which information is stored and retrieved.

disk capacity
The number of *bytes* a disk can hold.

disk density
Density refers to the surface coating on a disk. The closer together the particles on the disk are, the higher the disk's capacity.

bytes, kilobytes, and megabytes
A *byte* is a unit of measurement.
One *byte* is the amount of space needed to hold one character.
The size of many computer parts are measured in *bytes*:
the computer's memory
file size
disk capacity

kilo means 1,000
mega means 1,000,000

1 byte (b)
= space for one character

1 kilobyte (K)
= about **1,000 bytes**

1 megabyte (MB)
= about **1,000,000 bytes**

write-protect
To use a procedure that will protect a disk from being changed in any way while still allowing you to read the information on the disk.

write-protect tab
A small self-adhesive tab that often comes packaged with disk labels and is used to cover the write-enable notch on a 5¼" floppy disk.

DISK HANDLING TIP (Rule of Thumb):
If you put your right thumb on the disk label when you put the disk in the disk drive, it is likely to be oriented correctly.

Kinds of disks

There are two kinds of disks: *floppy disks* and *hard disks*.

Hard disks are usually enclosed in the computer case and cannot be touched. *Hard disks* have much larger **capacity** than *floppy disks*, usually between 40MB and 300MB.

Floppy disks are put into *floppy disk drives* that are built into the computer. Being able to identify the variety of floppy disks and their different densities is important because certain DOS commands (such as DISKCOPY and DISKCOMP) need to use disks that are formatted to the same **size** and **density**.

Floppy disk sizes and densities

There are two standard floppy disk sizes: **5¼"** and **3½"**. Each of the two disk sizes comes in a variety of densities. The different densities mean that they can be formatted to hold different amounts of information.

The following floppy disks are standard today:

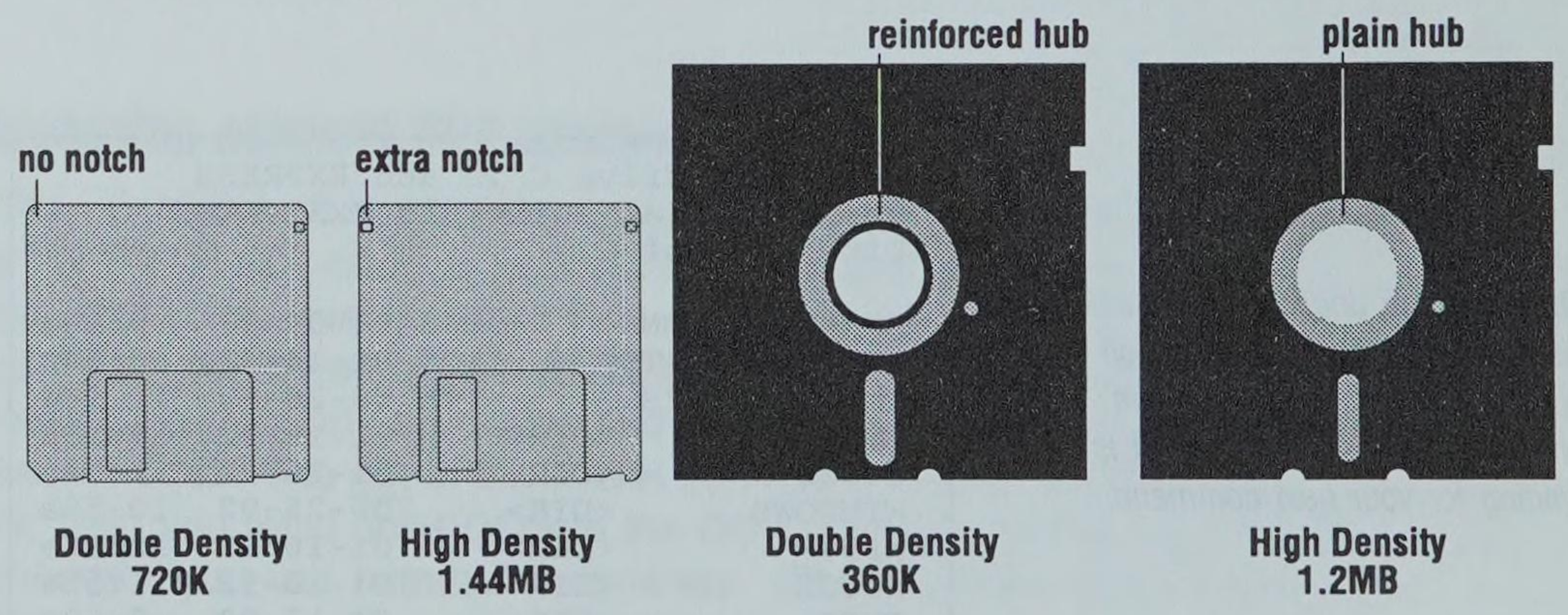
SIZE	*DENSITY*	*CAPACITY*
5¼"	*DD (double density)*	*360K (360,000 bytes)*
5¼"	*HD (high density)*	*1.2MB (1,200,000 bytes)*
3½"	*DD (double density)*	*720K (720,000 bytes)*
3½"	*HD (high density)*	*1.44MB (1,440,000 bytes)*

*NOTE: For information about **bytes**, **kilobytes**, and **megabytes**, see "Terms and Notes."*

Identify the differences in floppy disks

Most **5¼"** disks that can be formatted to **1.2MB** have a *plain hub* around the inside of the disk, while most **5¼" disks** that are meant to be formatted to **360K** have a *reinforced hub*.

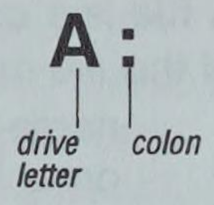
Most **3½"** disks that can be formatted to **1.44MB** have *two* "notches" while most **3½"** disks that can be formatted to **720K** have *one* "notch."



*IMPORTANT: Every floppy disk has a **write-enable notch** (right side of each disk in illustration). You can alter this notch to prevent anyone from changing data on the disk. To **write-protect** a 3½" disk, you must slide the tab so the hole is open. To write-protect a 5¼" disk, you must place a **write-protect tab** (or a piece of tape) over the cut-out notch.*

Every disk drive has its own letter

DOS assigns a letter to every disk in your system. DOS knows that you are talking about a disk drive when a command contains a *letter* followed by a *colon*:



What disk drives do you have?

There are three standard disk drive options that may be available on your system.

1. Drive A: - (a floppy disk drive—either 5¼" or 3½")
2. Drive B: - (a floppy disk drive—either 5¼" or 3½")
3. Drive C: - (a hard disk drive)

Your computer system will have at least one floppy disk drive, usually drive A:. This book *assumes* that your computer system has a hard disk drive, usually drive C:. Your system may or may not have a second floppy disk drive, usually drive B:.

The *hard disk* and its *drive* is one unit that is usually enclosed inside the computer case. Hard disk drives have a much faster access time than floppy disk drives.

Floppy disk drives have an opening so you can put a *floppy disk* into them.

What size and capacity is your floppy disk drive?

Floppy disk drives come in two different sizes (5¼" and 3½"), and each size comes in different capacity levels. These days, disk drives that use high-density disks are more common than disk drives that use only double-density disks.

Four different floppy disk drives are examined below:

Floppy Disk Drives	*5¼" Disk Drives*	*3½" Disk Drives*
Double Density	***360K disk drives*** *can read and format only 360K disks (not 1.2MB disks).*	***720K disk drives*** *can read and format only 720K disks (not 1.44MB disks).*
High Density	***1.2MB disk drives*** *can read both 1.2MB and 360K disks and can format disks to both 1.2MB and 360K (however, you must use a special format command to format disks to 360K).*	***1.44MB disk drives*** *can read both 1.44MB and 720K disks and can format disks to both 1.44MB and 720K (however, you must use a special format command to format disks to 360K).*

NOTE: You should not format double-density (DD) disks to high-density (HD) nor high-density (HD) disks to double-density (DD).

TOPIC 8
Disk Drives

OBJECTIVES:

- identify how disk drives are named
- identify your disk drives
- identify the size and capacity of your floppy disk drive(s)

– Terms and Notes –

disk drives
Devices that your computer uses to transfer information back and forth between the computer's **memory** and **disks**.

hard disk drive
A built-in storage device that has a non-removable disk (a fixed disk) with a large capacity. Hard disks provide fast retrieval and storage of files.

floppy disk drive
A storage device that retrieves and stores files on removable media called floppy disks.

TOPIC 9
Files

OBJECTIVES:

- identify what files are
- identify the rules for naming files
- identify *filename extensions* that DOS uses for special jobs
- identify *filename extensions* that have developed special meanings through common usage
- identify *filename extensions* that certain programs add to filenames
- consider how you can develop filename extensions to help you *group* files
- identify where files are stored

– Terms and Notes –

file
A *collection of data* that is given a *filename* and stored on a disk.

program file
A file that holds a *set of instructions* that perform a task, such as word processing or database management.

data file
A file that consists of *data that has been created in a program*, such as a *document* typed in a *word processing program*.

filename
The name assigned to a *collection of data* that is stored on a disk.

filename extension
The *optional* "period and up to three characters" at the end of a *filename*.

ASCII file
ASCII (American Standard Code for Information Interchange) – files saved in ASCII format contain only text and are free of formatting codes (such as underlines). These "text" files often use a .TXT *filename extension*.

Files

A **file** is a *collection of data* that is given a *filename* and stored on a disk. Some of the *file managing* jobs that DOS helps you do are:

name files	retrieve files	copy files
organize files	resave files	delete files
save files	list files	rename files

Filenames

A *filename* is the name you assign to a *collection of data* that you save on a disk. DOS's rules for *filenames* are:

1. The filename can be no longer than 8 characters.
   NOTE: When you name files, use filenames that describe the file's contents.
2. You cannot use these characters: . " / \ [ ] : * | < > + = ; , ?
3. You cannot use a space.
4. You CAN add an optional *filename extension* of a period and up to three characters.

Filename extensions

Filename extensions are often used to identify groups of related files. DOS has assigned certain filename extensions to do special jobs:

.EXE	execution (for program files)
.COM	command (for DOS commands or program files)
.SYS	system (for files that work with your hardware)
.BAT	batch (for files that contain a set of DOS commands)

Some *filename extensions* have developed special meanings through common usage, for example:

.TXT	text (for ASCII text files)
.DAT	data (for data files)

Some *filename extensions* are automatically added by a program, for example:

.WK1	Lotus 1-2-3's worksheet files
.DOC	Microsoft Word's document files
.DB	Paradox's database files
.BMP	Windows' Paintbrush bitmap drawing files

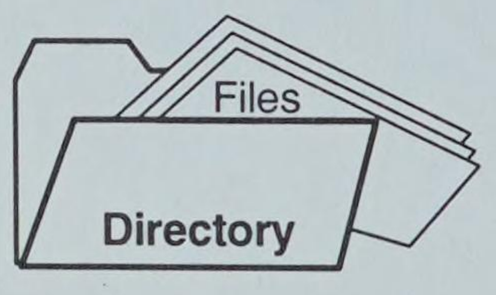
You may wish to develop your own filename extensions to help you organize your files; for example:

.LET	letter (for letters)
.RPT	report (for reports)
.MEM	memo (for memos)

NOTE: Using filename extensions in this way lets you use certain commands, such as COPY, MOVE, or DELETE, on "groups of files."

Where are files stored?

All files are stored on disks in **directories** (see next topic).



Directories

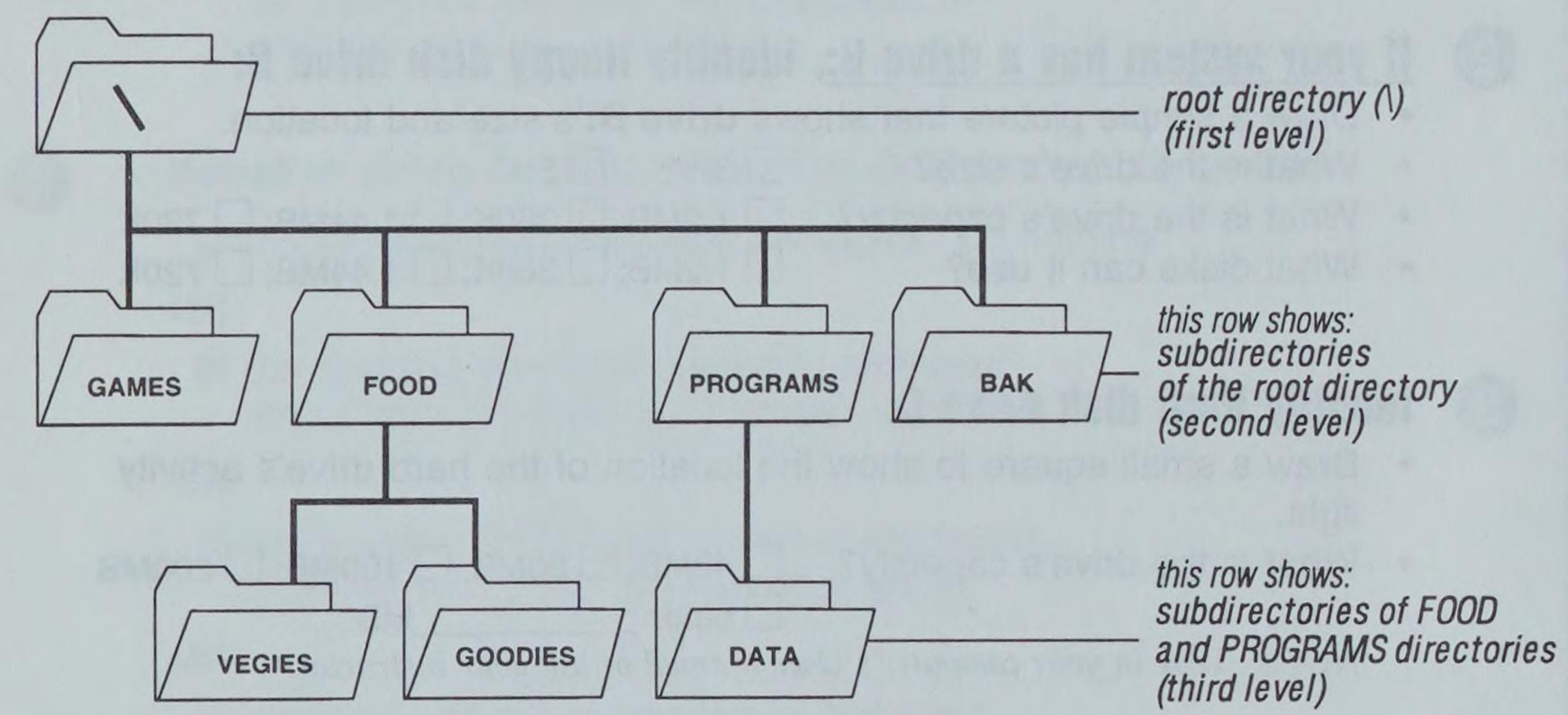
DOS lets you create directories so you can organize files on your disk. For example, you may want to save all your *game files* in a directory called GAMES and all your *recipe files* in a directory called FOOD. You may want to further organize your recipes by storing them in directories according to the *type* of food they emphasize, for example, VEGGIES and GOODIES.

Directory levels

The top directory on a disk is called the **root directory** (\). From this directory other directories (called **subdirectories**) can be created. They form the second directory level. From each second-level directory, additional *subdirectories* can be created, forming a third level of directories. While *directory* levels *can* be added until you run out of disk space, it is usually best to limit the number of directory levels. This will make it easier to specify where a file is located when you type the path to a file as shown below.

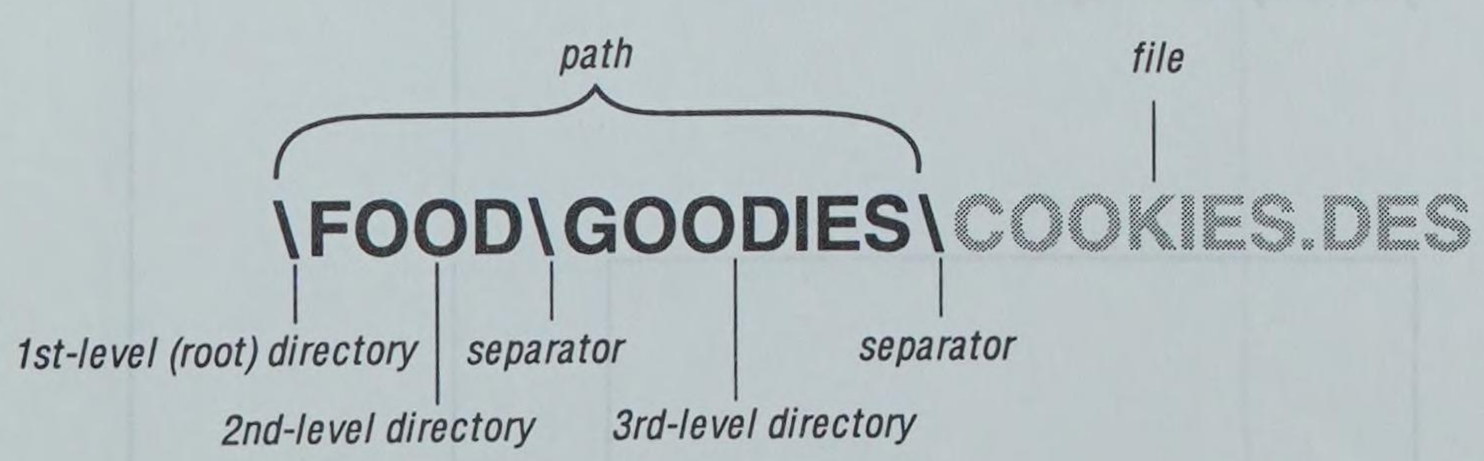
While every directory except the *root* directory is a *subdirectory* of some other directory, the term *subdirectory* is used in this book only to show the relationship between two directories.

Directory structure



Directory path (path to a file)

A file within the directory structure is found by following a **path**. The path begins with the root directory (\), and each *directory* in the **path** is separated from other directories (and the filename if it is used) by a backslash. For example, if the *file* named COOKIES.DES was in the GOODIES *directory* of the directory structure shown above, the **path** to it would look like this:



TOPIC 10 Directories

OBJECTIVES:

- identify why directories are used
- identify directory levels
- examine a directory structure
- identify the *directory path* to a file

– Terms and Notes –

directory
The part of the disk structure that holds *files* that are stored on a disk. A directory can also hold other directories (called subdirectories).

subdirectory
A directory that is within another directory.

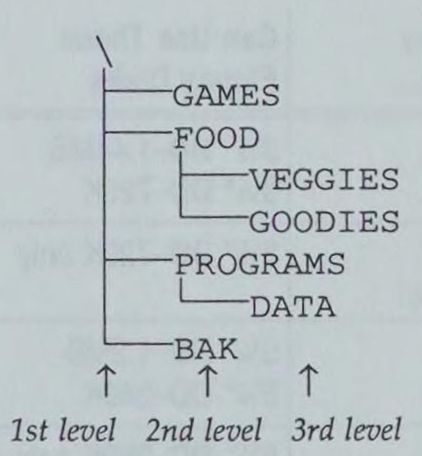
root directory
The top-level directory. Root directories are represented by a backslash (\).

current directory
The directory you are working in.

directory structure
The organization of directories on a disk. Also called a directory tree.

path
The list of directories that DOS goes through to find a directory or file.

another way to look at directory structure
DOS uses this method to list the directories on your disk when you use the TREE command (page 38).



EXERCISE 1
Disk Drives

Mechanical devices that store and retrieve information on disks.

OBJECTIVES:

- identify your disk drives
- identify sizes of your disk drives
- identify capacity of your disk drives
- identify disks used by your disk drives

– Terms and Notes –

hard disk
A large-capacity storage area that is built into your computer and offers fast data storage and retrieval.

floppy disk
A small, flexible disk on which information can be stored and retrieved. Even though 3½" disks have a hard plastic case, they are still called floppy disks.

floppy disk size
Floppy disks come in two sizes: 3½" and 5¼".

disk density
The type of coating on a disk. Different densities allows more (HD) or less (DD) information to be stored on a disk.

disk capacity
The amount of data a disk can hold—it differs depending on a disk's *density*. Disk capacity is measured in bytes, kilobytes (K), and megabytes (MB). (See Topic 7)

Which floppy disks does your floppy disk drive use?

This Floppy Disk Drive...	Can Use These Floppy Disks
3½" HD (high density)	3½" HD–1.44MB 3½" DD–720K
3½" DD (double density)	3½" DD–720K only
5¼" HD (high density)	5¼" HD–1.2MB 5¼" DD–360K
5¼" DD (double density)	5¼" DD–360K only

NOTE: The DS notation on disks indicates that they are double sided. Almost all floppy disks sold today are double sided.

What disks does your floppy disk drive use?

Floppy disk drives come in two sizes—3½" and 5¼", and each size comes in two densities—**HD** (high density) and **DD** (double density).

HD disk drives can use both *HD* and *DD disks*, while **DD disk drives** can use only *DD disks*. Most **floppy disk drives** sold today are **HD**, but you *may* have a **floppy disk drive** that is **DD**.

You cannot tell by looking at a **floppy disk drive** what *density* it is. You can find this information in your computer's reference manual or you can simply try a DIR command (page 30) on an *HD disk* in your **floppy disk drive** to see if it can read the disk. If it can, it is an **HD disk drive**.

Draw the **disk drive** in each step below on the computer illustration at the bottom of the page that matches your computer's shape.

❶ Identify floppy disk drive A:

- Draw a simple picture that shows **drive A:**'s size and location.
- What is the drive's size? ☐ 3½"; ☐ 5¼"
- What is the drive's capacity? ☐ 1.2MB; ☐ 360K; ☐ 1.44MB; ☐ 720K
- What disks can it use? ☐ 1.2MB; ☐ 360K; ☐ 1.44MB; ☐ 720K

❷ If your system has a drive B:, identify floppy disk drive B:

- Draw a simple picture that shows **drive B:**'s size and location.
- What is the drive's size? ☐ 3½"; ☐ 5¼"
- What is the drive's capacity? ☐ 1.2MB; ☐ 360K; ☐ 1.44MB; ☐ 720K
- What disks can it use? ☐ 1.2MB; ☐ 360K; ☐ 1.44MB; ☐ 720K

❸ Identify hard disk drive C:

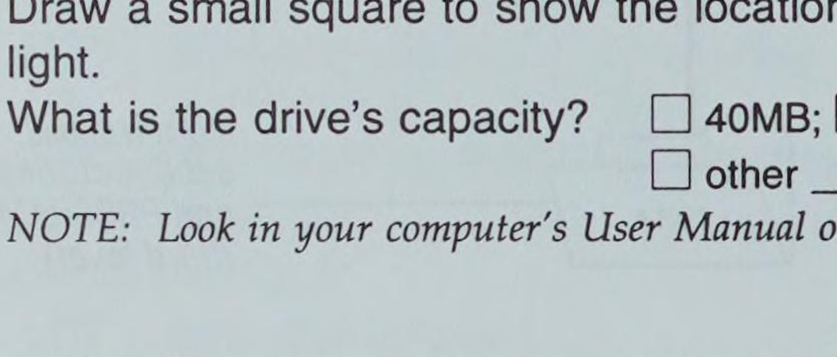
- Draw a small square to show the location of the hard drive's activity light.
- What is the drive's capacity? ☐ 40MB; ☐ 80MB; ☐ 100MB; ☐ 200MB ☐ other _____MB

NOTE: Look in your computer's User Manual or ask your instructor.

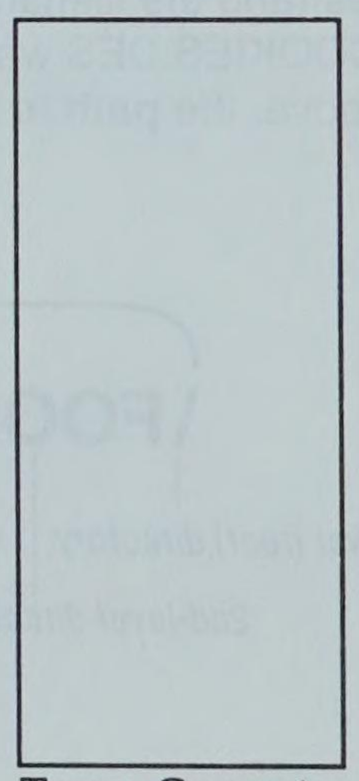
❹ Identify other drives your computer may have.

- ☐ CD-ROM drive
- ☐ Bernoulli drive
- ☐ other _____

Draw and label your disk drives on the computer that matches your computer's shape.



Desktop Computer



Tower Computer

Be cautious with the hard disk

Because the **hard disk** holds large amounts of information, people sometimes become protective of it. They fear that their information might be inadvertently deleted or somehow lost. In order to avoid unnecessary contact with the **hard disk**, most of the exercises in this book instruct you to work with the **Learning Disk** in **drive A:**

However, most computer systems have DOS loaded on the **hard disk**, and certain DOS commands must be accessed from the **hard disk**. This book assumes that you have a **hard disk** with DOS on it. You will access the **hard disk** and work on it sometimes. When you do, please follow directions carefully to avoid problems.

1 **IMPORTANT: There should not be a disk in drive A:**

- **Turn on** the computer system.
  NOTE: If this is not obvious, ask your teacher or refer to your user's manual.

Result

Different computer systems may display different results:

- *The DOS prompt may be displayed:* **C>** *or* **C:\>**, *or*
- *the opening Windows screen may be displayed, or*
- *the opening DOS Shell screen may be displayed, or*
- *a menu program may be displayed.*

2 • **Select** an option below to access the *DOS prompt*: **C>** or **C:\>**

IF the *DOS prompt* is already displayed: do nothing.

OR

IF the opening Windows screen is displayed:
Press Alt + F4, then ↵ (to exit Windows).

OR

IF the opening DOS Shell screen is displayed:
Press Alt + F, X (to exit DOS Shell).

OR

IF some sort of menu program is displayed:
You must discover how to exit the menu program—you may need to know a password.

NOTE: Since there are many different possibilities, this book cannot specify what may happen on your computer system.

Result

```
C:\>
```

3 • **Go on** to Exercise 3.

EXERCISE 2
Access the DOS Prompt

To turn on the computer and display the *DOS prompt* on the hard disk. It usually appears as: C> or C:\>.

OBJECTIVES:

- turn the computer on
- discover how to access the DOS prompt on the hard disk

– Terms and Notes –

NOTE: The instructions in this book suggest some ways you might access the DOS prompt on the hard disk. Accessing the hard disk may require steps other than those shown here. If you are a student, your instructor should be able to show you what to do. If you are a private user, refer to your user's manual or get help from a computer expert.

DOS prompt
The signal that DOS uses to let you know that it is ready for you to tell it what to do.

EXERCISE 3
Change Drives

Makes a different disk drive active. *Changing drives* is also referred to as "logging on" to a drive.

OBJECTIVES:

- change disk drives
- see what happens when you enter the name of a nonexistent disk drive
- see what happens when you change to a disk drive with no disk in it
- use two ways to recover from a "not reading drive" error

– Terms and Notes –

active drive
The drive you are currently using.

active DOS prompt
The last DOS prompt on your screen. DOS leaves the commands you have entered on the screen so that you can see the results of previous commands.

NOTE: DOS does not care whether you use uppercase or lowercase letters when typing commands. This book uses uppercase only for clarity and consistency.

STEPS to

Change drives

1 Type the drive letter.
2 Type :
3 Press ↵

Continue from Exercise 2

About the Learning Disk

This is the first time you will use the Learning Disk that came with this book. Before you use the Learning Disk, it is a good idea to use DISKCOPY to make a **backup** copy of the Learning Disk (see Exercise 18) however you can continue without making a backup. The original Learning Disk should remain unchanged since it will be "diskcopied" to a "DUPLICATE" Learning Disk at several stages throughout this book.

You can further protect the Learning Disk by "write-protecting" it (see Topic 7 and Exercise 18, step 1).

1 • **Place** the **Learning Disk** that came with this book in drive A:.

*NOTE: If the Learning Disk does not match the **size** of your disk drive A: or if your disk drive is not **high density (HD)**, see page iv for information about obtaining a Learning Disk you can use in drive A: on your computer system. Page iv also contains information about how you can possibly use the Learning Disk in drive B: until you receive your new Learning Disk or how you can possibly create a new Learning Disk.*

2 Change to drive A:

• **Type** `A:` ↵

The light in drive A: comes on, and the DOS prompt for drive A: appears on the screen indicating that drive A: is now active.

```
C:\>A:

A:\>    ← active DOS prompt
```

*NOTE: Your **DOS prompt** may appear slightly different. Exercise 5 will show you how to change the **DOS prompt**.*

3 Change back to drive C:

• **Type** `C:` ↵

```
C:\>A:

A:\>C:

C:\>  ← active DOS prompt
```

Exercise 3 continued...

4 • **Repeat** steps **2** and **3** four times, ending on step **2** (drive A:).

5 Intentionally change to a nonexistent disk drive:

• **Type** Q: ↵

The following error message appears:

```
Invalid drive specification
```

6

• **Change** to drive C: (see step 3).

```
C:\>
```

7 Intentionally change to a drive without a disk in it:

• **Take** the disk out of drive A:.

• **Type** A: ↵

The following error message appears, and options to choose from appear below the message:

```
Not ready reading drive A
Abort, Retry, Fail?
```

NOTE: When you enter a command to change to a drive, DOS does not just respond with the prompt for drive A:, DOS tries to "read" the information on the disk before displaying a DOS prompt.

One Solution:

• **Type** F to try the "Fail" option.

DOS displays the following message:

```
Current drive is no longer valid>
```

• **Type** C: ↵ to tell the computer to go to drive C: (which is a valid drive).

```
C:\>
```

8 Try a different solution to step 7:

With the disk still out of drive A:

• **Type** A: ↵

The following error message appears:

```
Not ready reading drive A
Abort, Retry, Fail?
```

• **Put** the disk back in drive A:, and close the door if necessary.

• **Type** R to tell the computer to "retry" the original command.

```
A:\>
```

9

• **Go on** to Exercise 4.

IMPORTANT: As you continue through the book, some screen "result boxes" may omit the final prompt (A:\>) or some beginning lines.

Exercise 3 (continued)
Change drives

STEPS to

Respond to "Abort, Retry, Fail?" message

- Correct the problem (i.e., put the disk in the drive or put the disk in the drive in the correct way).
- Press the first letter of the option you want to select.

If you selected Fail,

- Type another drive letter followed by a colon and ↵

EXERCISE 4
CLS
(clear screen)

Removes all the information from the screen and displays a new *DOS prompt* at the top of the screen.

OBJECTIVES:

- use the CLS command to clear the screen
- correct errors in a command before pressing Enter
- identify the meaning of "bad command or file name" error message
- have DOS automatically retype your last command

– Terms and Notes –

error message
A message that DOS displays on your screen when it does not recognize what you have entered.

STEPS to

Clear the screen
- Type CLS ↵

Enter a command
1 Type the command name.
2 Press ↵

Make corrections
- Press BkSp until the unwanted characters are removed.

Repeat the last command
- Press F3

Continue from Exercise 3

Clear the screen

A lot of data is on the screen. CLS is the command that lets you clear the screen and return a DOS prompt to the top of the screen.

NOTE: While most exercises in this book ask you to perform activities that relate only to the command or task in the exercise name, this exercise asks you to do some activities that are unrelated to the CLS command.

❶ Clear the screen:

- **Type** CLS ↵

```
A:\>
```

❷ Correct mistakes before pressing enter:

- **Type** CLA
- **Press** BkSp to delete the "A".
- **Type** S
- **Press** ↵

```
A:\>
```

❸ Intentionally enter a bad command:

- **Type** what time is it ↵

```
Bad command or file name
```

*NOTE: "Bad command or file name" is a common **error message** that DOS displays when either:*
- *what you typed is not a DOS command (it is a "bad" command) or*
- *DOS was unable to find a filename that matches what you typed (it is a "bad" filename).*

- **Type** show me files ↵

```
Bad command or file name
```

❹ Repeat the last command:

- **Press** F3 ↵

```
Bad command or file name
```

❺
- **Type** CLS ↵

```
A:\>
```

❻
- **Change** *to Drive C: (review, Exercise 3).*

```
C:\>
```

❼
- **Go on** *to Exercise 5*
or **take** *the disk out of drive A: and turn the computer system off.*

What the DOS prompt tells you

The **DOS prompt** (also called the system prompt) is the signal that the computer is waiting for you to tell it what to do (see page 9).

The default DOS prompt

The **default** DOS prompt displays the *drive letter* and the *greater-than sign*, for example:

C>
current drive *greater-than sign*

The most common DOS prompt

Many computer systems go through an automatic procedure to change the DOS prompt when you turn the computer on. The DOS prompt is *usually* changed so that it will show the path to the current directory (the current drive and path) followed by the *greater-than sign*.

- If you are in the root directory, the prompt looks like this:

C:\>
current drive and path *greater-than sign*

- If you are in a directory named DOS, the prompt looks like this:

C:\DOS>
current drive and path *greater-than sign*

1 • **Access** the Learning Disk (review, Exercises 2 and 3).

2 • **Type** PROMPT ↵

```
A>
```

*NOTE: The PROMPT command, by itself, results in the **default** prompt, that is, the "current drive letter" followed by the "greater-than" sign.*

3 • **Type** PROMPT Hi There ↵

```
Hi There
```

4 • **Type** PROMPT Today is $D ↵

```
Today is Thur 04-15-93
```

5 • **Type** PROMPT The Time Is T_PG ↵

```
The Time Is 15:47:36.11
A:\>
```

6 • **Type** PROMPT PG ↵

```
A:\>
```

IMPORTANT: This DOS PROMPT is the one that this book will instruct you to use.

7 • **Take** the disk out of drive A: and turn the computer system off.

EXERCISE 5
PROMPT

Changes the appearance of the DOS prompt.

OBJECTIVES:

- identify and create the default **DOS prompt**
- identify and create the most commonly used **DOS prompt**
- create a **DOS prompt** that uses special **PROMPT codes** and/or text

– Terms and Notes –

default prompt
The prompt that is created when you type only the PROMPT command and press Enter.

common prompt
The DOS prompt that is created when you type PROMPT PG and press Enter. The *common prompt* displays the "path to the current directory" followed by the "greater-than sign," for example, **C:\>**.

current drive
The drive you are using, also called the *active* drive.

path
The route to a specific location in DOS's system of directories.

Commonly used PROMPT codes

Code	Displays
$P	current drive and path
$G	> (greater-than sign)
$T	time
$D	date
$L	< (less-than sign)
$Q	= (equal sign)
$B	| (pipe sign)
$_	carriage return

STEPS to

Change the DOS Prompt

1 Type PROMPT
2 Press Space
3 Type text and/or prompt codes (see above).
4 Press ↵

EXERCISE 6
VER (version)

Displays DOS's name and version number.

OBJECTIVE:

- determine the version of DOS that you are using

– Terms and Notes –

version
The numbering plan that identifies software revisions and upgrades. Version numbers have two parts: a whole number and a decimal.

version numbers
Version numbers have two parts:

6.00
↑ ↑
whole number part decimal part

minor version changes
When a software company makes *minor* changes (revisions) to a program, they change the *decimal* part of the version number.
For example:
if the old version was 5.1,
the new version would be 5.2.

major version changes
When a software company makes *major* changes (upgrades) to a program, they change the *whole number* part of the version number.
For example:
if the old version was 5.1,
the new version would be 6.0.

STEPS to

Determine the DOS version
1 Type VER
2 Press ↵

What version of DOS are you using?

Most of the exercises in this book can be done with any version of DOS. The newer versions of DOS have added some new commands such as MOVE and DELTREE (DOS 6). However, most of the basic commands and rules for managing your files have remained constant with each version of DOS.

You will need DOS 6 to complete all of the exercises in this book. Exercises that cannot be done with DOS 5 will be pointed out.

Some DOS commands and features that are new in DOS 5:

UNDELETE	*restore deleted files*
UNFORMAT	*restore a reformatted disk*
XCOPY	*copy a directory, its subdirectories, and their files*
MEM	*shows memory used and memory still available*
DOSSHELL	*start the DOS Shell file management program*

Some DOS commands and features that are new in DOS 6:

MOVE	*move a file or rename a directory*
DELTREE	*delete a directory and everything within the directory*
DBLSPACE	*compress files*
DEFRAG	*reorganize files*
MEMMAKER	*optimizes memory use for PC's with 80386 processors or higher*

1 • **Turn on** the computer system, and
• **Access** the **DOS prompt** on the hard disk (review, Exercises 2 and 3).

2 • **Type** VER ↵

```
MS-DOS Version 6.00
```

NOTE: You may have DOS 5.00 or an earlier DOS version.

3 • **Turn** the computer off.

The commands to perform each step are listed in Appendix F. Try to complete the exercise without looking at the Appendix for help.

1. **Start** the computer and **access** the DOS prompt on drive C:.

```
C:\>
```

2. **Place** the Learning Disk in drive A:.

3. **Change** to drive A:.

```
A:\>
```

4. **Change** the DOS prompt to the *default* DOS prompt.

```
A>
```

5. **Change** the DOS prompt to your name (type your own name).

```
(Your Name)
```

6. **Change** the DOS prompt to display the date after the following text:
   `Today's date is`

```
Today's date is (Day mm-dd-yy)
```

7. **Create** a two-line DOS prompt of your choice.

8. **Change** to the common DOS prompt that displays the "*current drive and path*" and the "*greater-than sign.*" *HINT: See Exercise 5, step 6.*

```
A:\>
```

9. **Display** the version of DOS you are using.

```
MS-DOS Version 6.00
```

NOTE: You may have a different version.

10. **Clear** the screen.

The DOS prompt appears at the top of the screen.

```
A:\>
```

11. **Type** `what time is it?` ↵ (a "bad command")

```
Bad command or file name
```

12. **Change** the DOS prompt to display the time after the following text:
    `Time:`

```
Time: (hh:mm:ss.xx)
```

13. **Change** back to the common DOS prompt that displays the "current drive and path" and the "greater-than sign" again.

```
A:\>
```

Exercise 7 continued...

EXERCISE 7
Practice

LESSON ONE
Getting Started

OBJECTIVE:

- review the Exercises in Lesson One:
  - Start the computer
    (and access the DOS prompt)
  - Change drives
  - PROMPT
  - VER (version)
  - CLS (clear screen)
  - Enter bad commands
  - Change to a nonexistent drive

14 **Clear** the screen.

```
A:\>
```

15 **Change** to drive C:.

```
C:\>
```

16 **Change** back to drive A:.

```
A:\>
```

17 **Change** to a nonexistent drive—drive J:

```
Invalid drive specification
```

18 **Change** to drive C: again.

```
C:\>
```

19 **Remove** the disk from drive A:.

20 **Change** to drive A:.

```
Not ready reading drive A
Abort, Retry, Fail?
```

21 **Put** the Learning Disk back in drive A: and close the door (if necessary).

22 **Type** R (to retry).

```
A:\>
```

23 **Remove** the disk from drive A:.

24 **Change** to drive A:.

```
Not ready reading drive A
Abort, Retry, Fail?
```

25 **Type** F (to select Fail).

```
Current drive is no longer valid>
```

26 **Type** C: ↵

```
C:\>
```

27 **Go on** to Worksheet 1.
If desired, **take** the disk out of drive A: and turn the computer off.

WORKSHEET 1

TOPICS 1 AND 2 — GETTING STARTED

NAME _____

DIRECTIONS: Use the following terms to fill in the blanks below.

printer	keyboard	disk drive	system software
monitor	software	floppy disk	read-only memory (ROM)
hardware	firmware	memory (RAM)	DOS (Disk Operating System)
computer	hard disk	processor (CPU)	application software (program)
mouse			

1. A screen that displays the information in the computer. 1. _____

2. A device that is used to enter data into and issue commands to the computer. 2. _____

3. Instructions that tell your computer how to perform a task. It is stored on disks in program files and cannot be seen or touched. 3. _____

4. A device that makes a hard copy of data in the computer. 4. _____

5. A mechanical device that you use to transfer information back and forth between memory and a disk. 5. _____

6. A kind of chip that holds information that cannot be changed. 6. _____

7. A large-capacity storage area that offers fast access to store and retrieve information. 7. _____

8. A magnetically coated disk on which information can be stored and retrieved. 8. _____

9. Software that runs the computer. 9. _____

10. Software that does a specific task, such as word processing. 10. _____

11. A kind of *system software*—instructions that are built into the computer system on ROM chips. 11. _____

12. The group of parts that make up the computer system. It can be seen and touched. 12. _____

13. A special kind of *system software* that is stored on the hard disk. It acts as a link between *application software* and the computer's hardware. 13. _____

14. The part of the computer that processes the instructions that are in memory. 14. _____

15. An electronic device that performs complex tasks at high speed and with great accuracy. There are two main parts—*processor* and *memory*. 15. _____

16. The area of the computer that holds instructions (programs) and information you give it. When you turn the computer off, everything in it disappears. 16. _____

17. A small hand-held device you use to control a pointer on the screen. 17. _____

(This page may be copied.)

WORKSHEET 2

NAME _____

TOPICS 3, 4, 5, 6, and 7

DIRECTIONS: Use the following terms to fill in the blanks below.

DOS	program	DOS command	external DOS commands
disks	hardware	disk density	disk and directory structure
bytes	you (user)	disk capacity	
booting	DOS prompt	internal DOS commands	

1. DOS commands that are stored in a file called COMMAND.COM and are automatically loaded into the computer's memory. Because they reside in memory, you can execute *them* at any time. 1. _____

2. The signal that the computer is waiting for you to tell it what to do. 2. _____

3. Media on which information is stored and retrieved. 3. _____

4. DOS commands that are stored in a file and that are accessible only if they can be reached on the disk and directory in which they are stored. 4. _____

5. The controller of the computer system (its software and hardware). 5. _____

6. A set of instructions (software) that your computer carries out to perform a specific task, such as *word processing*. 6. _____

7. *This* refers to the surface coating on a disk. The closer together the particles on the disk are, the higher the disk's capacity. 7. _____

8. System software that links you and programs to the computer's hardware. 8. _____

9. *This* is a unit of measurement. It is the amount of space needed to hold one character. The size of many computer parts are measured in *this*. 9. _____

10. The physical parts of your computer system—processor, memory, disks, disk drives, keyboard, and monitor, etc. 10. _____

11. The number of *bytes* a disk can hold. 11. _____

12. Instructions to DOS that cause an action to be carried out. 12. _____

13. A file storage system that provides for the creation of directories for the organization of files on disks. 13. _____

14. To begin the computer's start-up process, and load DOS into the computer's memory. 14. _____

(This page may be copied.)

WORKSHEET 3

NAME _____

TOPICS 8, 9, and 10

DIRECTIONS: Use the following terms to fill in the blanks below.

path	data file	subdirectory	filename extension
file	ASCII file	root directory	current directory
filename	disk drives	hard disk drive	directory structure
directory	program file	floppy disk drive	

1. The *optional* "period and up to three characters" at the end of a *filename*. 1. _____

2. The part of the disk structure that holds *files* that are saved on a disk. 2. _____

3. Files saved in *this* format contain only text and are free of any formatting codes (such as underlines). These "text" files often use a .TXT *filename extension*. 3. _____

4. The list of directories that DOS goes through to find a directory or file. 4. _____

5. A built-in storage device that has a non-removable disk (a fixed disk) with a large capacity that provides fast retrieval and storage of files. 5. _____

6. Devices that your computer uses to transfer information back and forth between the computer's memory and disks. 6. _____

7. A storage device that retrieves and stores files on removable media called floppy disks. 7. _____

8. A directory that is within another directory. 8. _____

9. A *collection of data* that is given a *filename* and stored on a disk. 9. _____

10. The top-level directory. It is represented as a backslash (\). 10. _____

11. The organization of directories on a disk. 11. _____

12. The directory you are working in. 12. _____

13. A file that holds a *set of instructions* that perform a task, such as word processing or database management. 13. _____

14. The name you assign to a *collection of data* that you save on a disk. 14. _____

15. A file that consists of *data that has been created in a program*, such as a *document* typed into a *word processing program*. 15. _____

(This page may be copied.)

WORKSHEET 4

NAME _____

EXERCISES 1, 2, and 3

DIRECTIONS: Use the following terms to fill in the blanks below.

hard disk	active drive	write-protect	Access the DOS prompt
Disk drives	disk density	floppy disk size	
DOS prompt	disk capacity	write-protect tab	
floppy disk	Change drives	active DOS prompt	

1. *This* refers to the amount of data a disk can hold—which is different depending on a disk's *density*. It is measured in bytes, kilobytes (K), and megabytes (MB). 1. _____

2. To turn on the computer and display the *DOS prompt* on the hard disk. 2. _____

3. A small, flexible disk on which information can be stored and retrieved. It describes a 3½" disk even though the 3½" disk has a *hard* plastic case. 3. _____

4. The signal that DOS uses to let you know that it is ready for you to tell it what to do. 4. _____

5. 3½ inches and 5¼ inches. 5. _____

6. The drive you are currently using. 6. _____

7. *This* refers to the type of coating on a disk. It allows more (HD) or less (DD) information to be stored on a disk. 7. _____

8. To make a different disk drive active. It is also referred to as "logging on" to a drive. 8. _____

9. A large-capacity storage area that is built in to your computer and offers fast storage and retrieval. 9. _____

10. The last DOS prompt on your screen. 10. _____

11. Mechanical devices that store and retrieve information on disks. 11. _____

12. A small self-adhesive tab that often comes packaged with disk labels and is used to cover the write-enable notch on a 5¼" floppy disk. 12. _____

13. To use a procedure that will protect a disk from being changed in any way while still allowing you to read the information on the disk. 13. _____

(This page may be copied.)

WORKSHEET 5

EXERCISES 4, 5, and 6

NAME _____

DIRECTIONS: Use the following terms to fill in the blanks below.

path	current drive	VER (version)	minor version changes
version	error message	CLS (clear screen)	the most common prompt
PROMPT	default prompt	major version changes	

1. The DOS command that displays DOS's name and version number. 1. _____

2. The kind of change that a software company makes to a program when it changes the *decimal* part of the version number. 2. _____

3. The numbering plan that identifies software revisions and upgrades. It has two parts: a whole number part and a decimal part. 3. _____

4. The kind of change that a software company makes to a program when it changes the *whole number* part of the version number. 4. _____

5. The DOS command that removes all information from the screen and displays a new *DOS prompt* at the top left corner of the screen. 5. _____

6. What DOS displays on your screen when it does not recognize what you have entered. 6. _____

7. The drive you are using, also called the *active* drive. 7. _____

8. The route to a specific location in DOS's system of directories. 8. _____

9. The command that changes the appearance of the DOS prompt. 9. _____

10. The prompt that is created when you type only the PROMPT command and press Enter. For example, C>. 10. _____

11. The prompt that is created when you issue this PROMPT command: PROMPT PG. For example, C:\>. 11. _____

(This page may be copied.)

WORKSHEET 6

NAME _____

LESSON ONE, Questions and Commands

1. What size is your disk drive A:? — 1. _____ *(answers will vary)*

2. What size is your disk drive B:? *(leave blank if you do not have a drive B:)* — 2. _____ *(answers will vary)*

3. Do your floppy disk drives accept *high density* (HD) disks? — 3. _____ *(answers will vary)*

4. How do you access the DOS prompt on drive C:?

4. _____ *(answers will vary)*

5. What PROMPT *code* displays the greater-than sign (>)? — 5. _____

6. What PROMPT *code* displays the *current drive and path*? — 6. _____

7. What PROMPT *code* displays the date? — 7. _____

8. What PROMPT *code* displays the time? — 8. _____

9. What PROMPT *code* creates a *carriage return* in the prompt line? — 9. _____

10. How do you guard against changing a disk in any way while still allowing information on the disk to be read? — 10. _____

11. How do you *write-protect* a 3½" disk? — 11. _____

12. How do you *write-protect* a 5¼" disk? — 12. _____

WHAT IS THE DOS COMMAND TO:

13. Change from drive C: to drive A: — 13. _____

14. Change the prompt to this: HELLO — 14. _____

15. Change the prompt to this: TODAY IS mm-dd-yy (where mm-dd-yy represents the date) — 15. _____

16. Change to the default DOS prompt: C> — 16. _____

17. Change to the most common DOS prompt: C:\> — 17. _____

18. Clear the screen — 18. _____

19. Display the version of DOS you are using — 19. _____

20. Change from drive A: to drive C: — 20. _____

NOTE: You do not need to write Enter at the end of each command.

(This page may be copied.)

DOS Lesson Two
Exploring Directories

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EXERCISE 8
DIR (directory)

Displays a list of files and/or directories within a directory, plus:

- **the *size* of each file in bytes,**
- **the *date* each file was created (or last changed),**
- **the *time* each file was created (or last changed),**
- **the *number* of files and directories on the disk,**
- **the bytes *used*, and**
- **the bytes *still available* on the disk.**

OBJECTIVES:

- use DIR to list the files and directories on your disk
- name the different parts of the directory list
- scroll the directory list
- use DIR to list the files on a disk drive other than the *current* one

– Terms and Notes –

directory
The part of the disk structure that holds *files* and/or other *directories*.

scrolling
The vertical movement of files on the screen.

STEPS to

List files

- Type DIR ↵

Scroll the DIR list

1 Type DIR ↵
2 Press Ctrl + S
The scrolling stops.
3 Press any key.
The scrolling continues.

List files on a different drive

1 Type DIR
2 Press Space
3 Type the desired drive location.
4 Press ↵

❶ Set up for the exercise (review Lesson One):

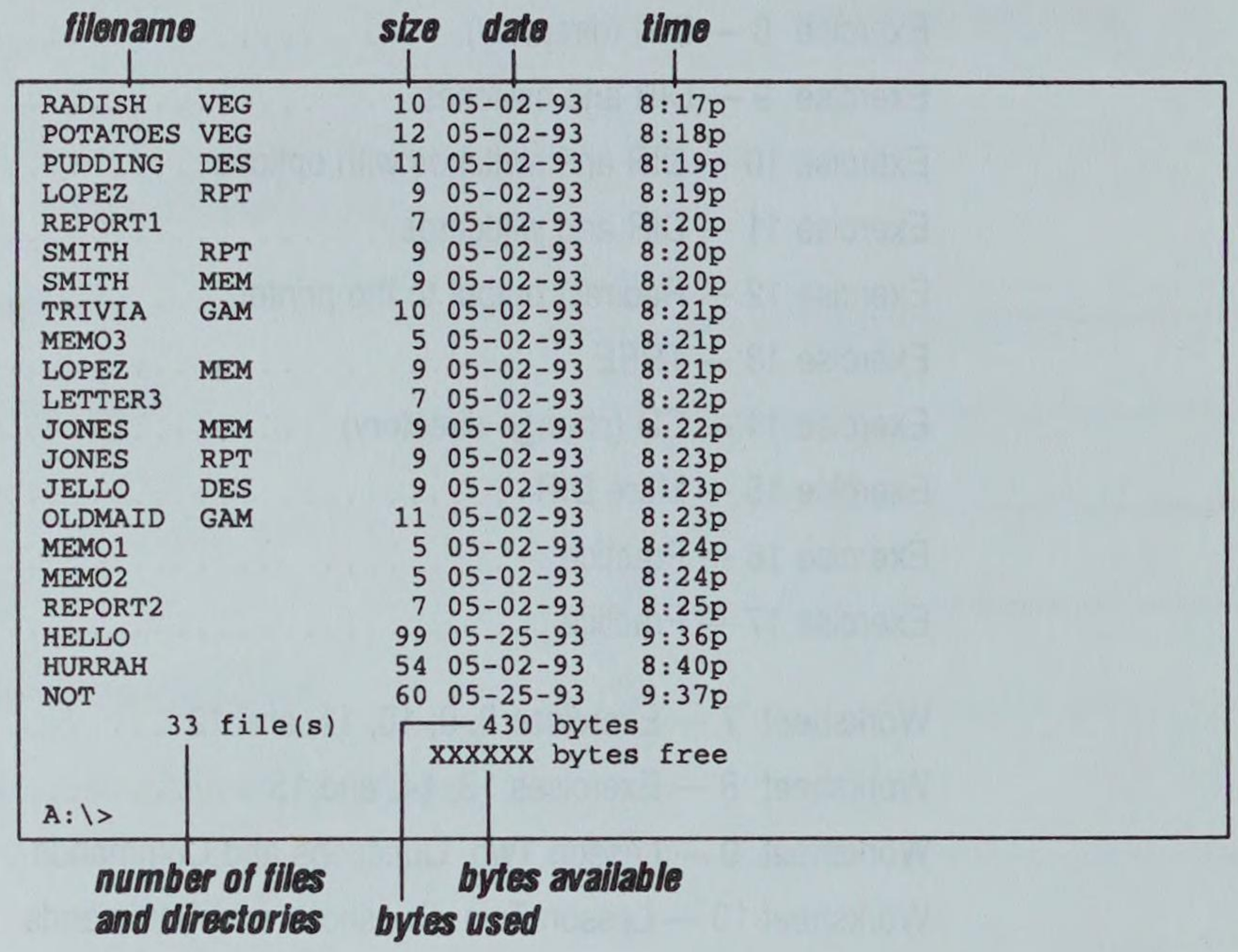
- **Start** the computer and **access** the DOS prompt on drive C:.
- **Place** the Learning Disk in drive A: and **change** to drive A:.
- **Change** to this common DOS prompt, if necessary: A:\>

NOTE: Most exercises will ask you to use a similar "setup" procedure "if necessary"—if you are continuing it will not be necessary (see Exercise 9).

❷ List files on the current drive and directory:

- **Type** DIR ↵

Filenames flash by on the screen, some scrolling out of view.



❸ List the files on a different disk drive:

- **Type** DIR C: ↵

*DOS lists the files on **drive C:** (the hard disk) and returns you to the DOS prompt on drive **A:** (the **current** drive).*

❹ Stop the DIR scrolling:

- **Locate** the Ctrl and S keys, and **be ready** to hold down Ctrl and tap S *quickly* after you issue the DIR command.
- **Type** DIR C: ↵
- **Press** Ctrl + S

The scrolling stops.

*NOTE: If you have a very fast computer **you may not be able to stop the scrolling** before the computer reaches the end of the list of files. This procedure is easier to do and the result of stopping and starting the scrolling is much easier if you have a long list of files, for example, over one hundred.*

- **Press** any key.

The scrolling starts again.

NOTE: If you want to continue to turn scrolling off and on, you can just hold down the Ctrl key while tapping S to alternate between scrolling and pausing.

❺

- **Go on** to Exercise 9
or **take** the disk out of drive A: and turn the computer off.

DIR and switches and spaces

A *switch* is an optional part of some DOS commands. When you type a command with a switch you *must* use a *slash* (/) to signal DOS that a switch is coming. You may also put a space before the switch, but DOS can understand the command without the space (see Topic 11, page 80). When a command contains just the command name and a switch you are less likely to see people use a space before the switch. When a command is more complex, you are more likely to see people use a space before the switch. For example:

simple command:	`DIR/P`	← no space precedes the switch
complex command:	`DIR C:\DOS /P`	← a space precedes the switch

This is not a rule. DOS can understand *both* commands *with* or *without* the space (either way is correct).

1 • If necessary, **access** the Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 **Pause the DIR at the end of each screenful:**

• **Type** `DIR/P` ↵

The first screenful of files is displayed.

```
 Volume in drive A is LEARNING          ← disk volume
 Volume Serial Number is XXXX-XXXX
 Directory of A:\                       ← current directory

GAMES          <DIR>      05-02-93   7:46p
FOOD           <DIR>      05-02-93   7:46p
PROGRAMS       <DIR>      05-22-93   8:41p
JONES     LET              9 05-02-93   7:48p
BAK            <DIR>      05-22-93   8:43p
SMITH     LET              9 05-02-93   8:13p
LOPEZ     LET              9 05-02-93   8:13p
LETTER1                    7 05-02-93   8:15p
REPORT3                    7 05-02-93   8:16p
LETTER2                    7 05-02-93   8:16p
CLUE      GAM              8 05-02-93   8:17p
CORN      VEG              8 05-02-93   8:17p
RADISH    VEG             10 05-02-93   8:17p
POTATOES  VEG             12 05-02-93   8:18p
PUDDING   DES             11 05-02-93   8:19p
LOPEZ     RPT              9 05-02-93   8:19p
REPORT1                    7 05-02-93   8:20p
SMITH     RPT              9 05-02-93   8:20p
SMITH     MEM              9 05-02-93   8:20p
Press any key to continue . . .
```

• **Press** any key.

The second (and final) screenful of files is displayed, and the DOS prompt appears at the bottom.

```
LOPEZ     RPT              9 05-02-93   8:19p
REPORT1                    7 05-02-93   8:20p
SMITH     RPT              9 05-02-93   8:20p
SMITH     MEM              9 05-02-93   8:20p
Press any key to continue . . .

(continuing A:\)
TRIVIA    GAM             10 05-02-93   8:21p
MEMO3                      5 05-02-93   8:21p
LOPEZ     MEM              9 05-02-93   8:21p
LETTER3                    7 05-02-93   8:22p
JONES     MEM              9 05-02-93   8:22p
JONES     RPT              9 05-02-93   8:23p
JELLO     DES              9 05-02-93   8:23p
OLDMAID   GAM             11 05-02-93   8:23p
MEMO1                      5 05-02-93   8:24p
MEMO2                      5 05-02-93   8:24p
REPORT2                    7 05-02-93   8:25p
HELLO                     99 05-25-93   9:36p
HURRAH                    54 05-02-93   8:40p
NOT                       60 05-25-93   9:37p
       33 file(s)          430 bytes
                        XXXXXX bytes free

A:\>
```

Continue Exercise 9 on the next page

EXERCISE 9
DIR and switches

To change the way DOS *normally* displays the contents of a directory by adding a *switch* to the end of the DIR command.

OBJECTIVES:

- define *switch*
- use switches to:
  - pause the directory output after each screenful
  - list your files in a wide format
  - list your files in alphabetical order
  - list your files in lowercase
  - list just your filenames
- use more than one switch at a time

– Terms and Notes –

switch
An optional code at the end of a command that directs the command to vary in a specific way.

A switch:
- comes at the end of a command,
- begins with a slash (/),
- and provides information that changes a command in a specific way.

common DIR switches

/P	**pause** at end of each screen
/W	list files in **wide** format
/B	**bare** list (just the filename)
/L	use **lowercase** characters
/S	list files in current directory and **subdirectories**
/O	list files in a specified **order** (default is alphabetical)

NOTE: This exercise deals only with DIR **switches**. Some other DOS commands use switches too.

STEPS to

STEPS to are on the next page.

EXERCISE 9 (continued)
DIR and switches

❸ List your files wide:

NOTE: With the "wide" switch you can see more files on the screen, but the file size, date, and time are not displayed.

- **Type** `DIR/W` ↵

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of A:\

[GAMES]         [FOOD]          [PROGRAMS]      JONES.LET       [BAK]
SMITH.LET       LOPEZ.LET       LETTER1         REPORT3         LETTER2
CLUE.GAM        CORN.VEG        RADISH.VEG      POTATOES.VEG    PUDDING.DES
LOPEZ.RPT       REPORT1         SMITH.RPT       SMITH.MEM       TRIVIA.GAM
MEMO3           LOPEZ.MEM       LETTER3         JONES.MEM       JONES.RPT
JELLO.DES       OLDMAID.GAM     MEMO1           MEMO2           REPORT2
HELLO           HURRAH          NOT
      33 file(s)                430 bytes
                              XXXXXX bytes free

A:\>
```

subdirectory — *filename extension* — *current directory* — *bytes used* — *bytes available* — *filename*

❹ List your files in alphabetical order:

- **Type** `DIR/O` ↵

```
LETTER1                7 05-02-93    8:15p
LETTER2                7 05-02-93    8:16p
LETTER3                7 05-02-93    8:22p
LOPEZ    LET           9 05-02-93    8:13p
LOPEZ    MEM           9 05-02-93    8:21p
LOPEZ    RPT           9 05-02-93    8:19p
MEMO1                  5 05-02-93    8:24p
MEMO2                  5 05-02-93    8:24p
MEMO3                  5 05-02-93    8:21p
NOT                   60 05-25-93    9:37p
OLDMAID  GAM          11 05-02-93    8:23p
POTATOES VEG          12 05-02-93    8:18p
PUDDING  DES          11 05-02-93    8:19p
RADISH   VEG          10 05-02-93    8:17p
REPORT1                7 05-02-93    8:20p
REPORT2                7 05-02-93    8:25p
REPORT3                7 05-02-93    8:16p
SMITH    LET           9 05-02-93    8:13p
SMITH    MEM           9 05-02-93    8:20p
SMITH    RPT           9 05-02-93    8:20p
TRIVIA   GAM          10 05-02-93    8:21p
       33 file(s)          430 bytes
                         XXXXXX bytes free

A:\>
```

❺ Combine two switches (order and pause):

- **Type** `DIR/O/P` ↵
  The first screenful appears in alphabetical order.
- **Press** any key.
  The second (and final) screenful appears.

❻ List just the filenames (bare list):

- **Type** `DIR/B` ↵
  Just the filenames appear.

❼ List the files in lowercase characters:

- **Type** `DIR/L` ↵
  The filenames appear in lowercase characters.

❽

- **Go on** to Exercise 10
  or **take** the disk out of drive A: and turn the computer off.

STEPS to

Use switches with the DIR command

1 Type `DIR`
2 Type /
3 Type a switch:
   P pause
   W wide
   B bare
   L lowercase
   S subdirectory files
   C compressed files
   O specific order
   A attributes
4 Press ↵

Use more than one switch with the DIR command

1 Type `DIR`
2 Type /
3 Type a switch.
4 Repeat steps 2 and 3 until all desired switches are typed.
5 Press ↵

1. • If necessary, **access** the Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2. **List files alphabetically by filename extension:**
   • **Type** `DIR/O:E` ↵
   DOS displays files alphabetically by filename extension.

```
REPORT2                7 05-02-93   8:25p
HELLO                 99 05-25-93   9:36p
HURRAH                54 05-02-93   8:40p
NOT                   60 05-25-93   9:37p
PUDDING   DES         11 05-02-93   8:19p
JELLO     DES          9 05-02-93   8:23p
CLUE      GAM          8 05-02-93   8:17p
TRIVIA    GAM         10 05-02-93   8:21p
OLDMAID   GAM         11 05-02-93   8:23p
JONES     LET          9 05-02-93   7:48p
SMITH     LET          9 05-02-93   8:13p
LOPEZ     LET          9 05-02-93   8:13p
SMITH     MEM          9 05-02-93   8:20p
LOPEZ     MEM          9 05-02-93   8:21p
JONES     MEM          9 05-02-93   8:22p
LOPEZ     RPT          9 05-02-93   8:19p
SMITH     RPT          9 05-02-93   8:20p
JONES     RPT          9 05-02-93   8:23p
CORN      VEG          8 05-02-93   8:17p
RADISH    VEG         10 05-02-93   8:17p
POTATOES  VEG         12 05-02-93   8:18p
       33 file(s)          430 bytes
                        XXXXXX bytes free
A:\>
```

3. **List your files from small to large:**
   • **Type** `DIR/O:S` ↵
   DOS displays files in order by file size.

```
REPORT2                7 05-02-93   8:25p
CLUE      GAM          8 05-02-93   8:17p
CORN      VEG          8 05-02-93   8:17p
JONES     LET          9 05-02-93   7:48p
SMITH     LET          9 05-02-93   8:13p
LOPEZ     LET          9 05-02-93   8:13p
LOPEZ     RPT          9 05-02-93   8:19p
SMITH     RPT          9 05-02-93   8:20p
SMITH     MEM          9 05-02-93   8:20p
LOPEZ     MEM          9 05-02-93   8:21p
JONES     MEM          9 05-02-93   8:22p
JONES     RPT          9 05-02-93   8:23p
JELLO     DES          9 05-02-93   8:23p
RADISH    VEG         10 05-02-93   8:17p
TRIVIA    GAM         10 05-02-93   8:21p
PUDDING   DES         11 05-02-93   8:19p
OLDMAID   GAM         11 05-02-93   8:23p
POTATOES  VEG         12 05-02-93   8:18p
HURRAH                54 05-02-93   8:40p
NOT                   60 05-25-93   9:37p
HELLO                 99 05-25-93   9:36p
       33 file(s)          430 bytes
                        XXXXXX bytes free
A:\>
```

4. • **Experiment** as desired with other DIR *order* switch options. You will get an error message if DOS does not understand your instructions, but that will not hurt anything. For example, try:

   DIR/O:-N *(lists filenames in order from Z to A)*
   DIR/O:-D *(lists date and time in order from last to first)*
   DIR/O:-G *(lists directories below files)*

5. • **Go on** to Exercise 11
   or **take** the disk out of drive A: and turn the computer off.

EXERCISE 10
DIR and switches with options

To vary the way a *switch* changes the DIR command by adding an *option* at the end of the switch.

OBJECTIVES:

- define *switch option*
- use *order* switch options to list your files in different orders, such as:
  - by filename
  - by file extension
  - by file size
  - by file date
  - with directories listed first or last

– Terms and Notes –

switch option
A code which:
- comes at the end of a switch,
- begins with a colon (:),
- and provides optional information that changes a *switch* in a specific way.

NOTE: A switch option must immediately follow the **switch** it is meant to change.

order switch options

Code	Resulting Order
`:n`	name-(A–Z) (default)
`:-n`	name-(Z–A)
`:e`	filename extension-(A–Z)
`:-e`	filename extension-(Z–A)
`:d`	date and time-first to last
`:-d`	date and time-last to first
`:s`	size-smallest to largest
`:-s`	size-largest to smallest
`:g`	directories listed above files
`:-g`	directories listed below files

STEPS to

Use the *order* switch options with the DIR command

1 Type `DIR/O:`
2 Type desired *order* option (see above).
3 Press ↵

EXERCISE 11
DIR and wildcards

To use *wildcards* with the DIR command to identify and list certain *groups of files* within a directory.

OBJECTIVES:

- define wildcards
- define the **?** wildcard
- define the ***** wildcard
- use wildcards with the DIR command to list *groups of files* that meet certain conditions, such as:
  - they all begin with "m"
  - they all end with "txt"
  - they all begin with "m" *and* end with "txt"
- see what happens when you enter a "bad" command

– Terms and Notes –

wildcard
A symbol that represents other characters. Wildcards are used to help you select specific *groups of files*.

* represents a *group of characters*
? represents any *single character*

For example:

`*.LET` will list the *group of files* that have .LET filename extensions.
`M*.*` will list the *group of files* that start with the letter "M."
`*.*` will list *all the files* in a directory.

NOTE: Wildcards are also useful with other DOS commands, such as COPY and DEL.

STEPS to

Use wildcards with the DIR command

1 Type `DIR`
2 Type a combination of *filename characters* and *wildcards* that define the files you want to list.
FOR EXAMPLE, to list all the files which begin with "L" type:
`DIR L*.*`
3 Press ↵

1 • If necessary, **access** the Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 List files that end with .VEG:

• **Type** `DIR *.VEG` ↵

```
CORN      VEG          8 05-02-93    8:17p
RADISH    VEG         10 05-02-93    8:17p
POTATOES  VEG         12 05-02-93    8:18p
```

NOTE: In an effort to save space, "result boxes" may show only the relevant part of your screen display. For example, in the "result box" above, just the files ending with .VEG are displayed rather than the entire screen display, which includes information about the disk, current directory, number of files, and bytes.

3 List files that begin with L:

• **Type** `DIR L*.*` ↵

```
LOPEZ     LET          9 05-02-93    8:13p
LETTER1                7 05-02-93    8:15p
LETTER2                7 05-02-93    8:16p
LOPEZ     RPT          9 05-02-93    8:19p
LOPEZ     MEM          9 05-02-93    8:21p
LETTER3                7 05-02-93    8:22p
```

4 Purposely specify files that do not exist:

• **Type** `DIR *.DOC` ↵
DOS reports that no file matches this filename pattern.

```
File not found
```

5 List the MEMO files:

• **Type** `DIR MEMO?` ↵

```
MEMO3                  5 05-02-93    8:21p
MEMO1                  5 05-02-93    8:24p
MEMO2                  5 05-02-93    8:24p
```

6 List files with a filename extension of .LET:

• **Type** `DIR *.LET` ↵

```
JONES     LET          9 05-02-93    7:48p
SMITH     LET          9 05-02-93    8:13p
LOPEZ     LET          9 05-02-93    8:13p
```

7 List files whose extensions end with T:

• **Type** `DIR *.??T` ↵

```
JONES     LET          9 05-02-93    7:48p
SMITH     LET          9 05-02-93    8:13p
LOPEZ     LET          9 05-02-93    8:13p
LOPEZ     RPT          9 05-02-93    8:19p
SMITH     RPT          9 05-02-93    8:20p
JONES     RPT          9 05-02-93    8:23p
```

8 List all the JONES files:

• **Type** `DIR JONES.*` ↵

```
JONES     LET          9 05-02-93    7:48p
JONES     MEM          9 05-02-93    8:22p
JONES     RPT          9 05-02-93    8:23p
```

9 • **Go on** to Exercise 12
or **take** the disk out of drive A: and turn the computer off.

Redirecting DOS's output

Unless you specify otherwise, DOS sends *output* (the results of your DOS commands) to the *screen*. If you want DOS to send *output* elsewhere, you must *redirect* the *output*. To *redirect* output *to the printer*, add the *redirect character* (>) and P R N to the end of a DOS command.

1. • If necessary, **access** the Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2. • Be sure the printer is turned on and ready to receive information.

3. • **Type** `DIR>PRN` ↵
   DOS sends output to the printer.

4. **If necessary, force the printer to "feed" your paper:**

*NOTE: When you send information to the printer from DOS, no "page feed" code is sent. To force the paper out of the printer, **most** printers require you to first turn the "on line" light off and then press the printer's "form feed" button.*

- Turn the "on line" light **off** (located on your printer).
- **Press** the "form feed" button.
- Turn the "on line" light back **on**.

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of A:\

GAMES          <DIR>      05-02-93   7:46p
FOOD           <DIR>      05-02-93   7:46p
PROGRAMS       <DIR>      05-22-93   8:41p
JONES     LET           9 05-02-93   7:48p
BAK            <DIR>      05-22-93   8:43p
SMITH     LET           9 05-02-93   8:13p
LOPEZ     LET           9 05-02-93   8:13p
LETTER1                 7 05-02-93   8:15p
REPORT3                 7 05-02-93   8:16p
LETTER2                 7 05-02-93   8:16p
CLUE      GAM           8 05-02-93   8:17p
CORN      VEG           8 05-02-93   8:17p
RADISH    VEG          10 05-02-93   8:17p
POTATOES  VEG          12 05-02-93   8:18p
PUDDING   DES          11 05-02-93   8:19p
LOPEZ     RPT           9 05-02-93   8:19p
REPORT1                 7 05-02-93   8:20p
SMITH     RPT           9 05-02-93   8:20p
SMITH     MEM           9 05-02-93   8:20p
TRIVIA    GAM          10 05-02-93   8:21p
MEMO3                   5 05-02-93   8:21p
LOPEZ     MEM           9 05-02-93   8:21p
LETTER3                 7 05-02-93   8:22p
JONES     MEM           9 05-02-93   8:22p
JONES     RPT           9 05-02-93   8:23p
JELLO     DES           9 05-02-93   8:23p
OLDMAID   GAM          11 05-02-93   8:23p
MEMO1                   5 05-02-93   8:24p
MEMO2                   5 05-02-93   8:24p
REPORT2                 7 05-02-93   8:25p
HELLO                  99 05-25-93   9:36p
HURRAH                 54 05-02-93   8:40p
NOT                    60 05-25-93   9:37p
       33 file(s)          430 bytes
                        XXXXXX bytes free
```

Continue Exercise 12 on the next page...

EXERCISE 12
Redirect output to the printer

To use a code which tells DOS to send the *output* of your command to the *printer* rather than the *screen*.

OBJECTIVES:

- send your *directory list* to the printer
- force the printer to "feed" paper that does not have a "page feed" code
- combine several DIR outputs on one piece of paper

– Terms and Notes –

PRN (printer)
DOS's name for the printer.

output
The *results* of your DOS command, *normally* displayed on the screen.

redirect
To change (redirect) the place a command *gets information from* or *sends information to*.

redirect character	redirect action
>	Send output of a command to a *file* or *device* (such as a printer).
<	Get the input needed for a command from a *file* (rather than the keyboard).
>>	Add output from a command to the *end* of a file.

NOTE: The redirect characters "<" and ">>" are not covered in this book.

STEPS to

Redirect output to the printer
1 Type the desired command.
2 Type `>PRN`
3 Press ↵

❺ Send an alphabetical directory list to the printer:

- **Type** `DIR/O>PRN` ↵
- **Force** the printer to "feed" your paper (review step 4).

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of A:\

BAK            <DIR>      05-22-93   8:43p
FOOD           <DIR>      05-02-93   7:46p
GAMES          <DIR>      05-02-93   7:46p
PROGRAMS       <DIR>      05-22-93   8:41p
CLUE       GAM             8 05-02-93   8:17p
CORN       VEG             8 05-02-93   8:17p
HELLO                     99 05-25-93   9:36p
HURRAH                    54 05-02-93   8:40p
JELLO      DES             9 05-02-93   8:23p
JONES      LET             9 05-02-93   7:48p
JONES      MEM             9 05-02-93   8:22p
JONES      RPT             9 05-02-93   8:23p
LETTER1                    7 05-02-93   8:15p
LETTER2                    7 05-02-93   8:16p
LETTER3                    7 05-02-93   8:22p
LOPEZ      LET             9 05-02-93   8:13p
LOPEZ      MEM             9 05-02-93   8:21p
LOPEZ      RPT             9 05-02-93   8:19p
MEMO1                      5 05-02-93   8:24p
MEMO2                      5 05-02-93   8:24p
MEMO3                      5 05-02-93   8:21p
NOT                       60 05-25-93   9:37p
OLDMAID    GAM            11 05-02-93   8:23p
POTATOES   VEG            12 05-02-93   8:18p
PUDDING    DES            11 05-02-93   8:19p
RADISH     VEG            10 05-02-93   8:17p
REPORT1                    7 05-02-93   8:20p
REPORT2                    7 05-02-93   8:25p
REPORT3                    7 05-02-93   8:16p
SMITH      LET             9 05-02-93   8:13p
SMITH      MEM             9 05-02-93   8:20p
SMITH      RPT             9 05-02-93   8:20p
TRIVIA     GAM            10 05-02-93   8:21p
       33 file(s)          430 bytes
                        XXXXXX bytes free
```

❻ Send four different DIR commands to the printer:

This step will combine the output from four DIR commands on one piece of paper.

- **Type** `DIR SMITH.*>PRN` ↵
- **Type** `DIR *.LET>PRN` ↵
- **Type** `DIR *.VEG>PRN` ↵
- **Type** `DIR L*.*>PRN` ↵

NOTE: Your printer may automatically eject paper after each command. If so, your results will be printed on four separate pieces of paper rather than one.

Exercise 12 continued...

7 • If necessary, **force** the printer to "feed" the paper (review, step 4).

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of A:\

SMITH    LET          9 05-02-93   8:13p
SMITH    RPT          9 05-02-93   8:20p
SMITH    MEM          9 05-02-93   8:20p
       3 file(s)          27 bytes
                       XXXXXX bytes free

 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of A:\

JONES    LET          9 05-02-93   7:48p
SMITH    LET          9 05-02-93   8:13p
LOPEZ    LET          9 05-02-93   8:13p
       3 file(s)          27 bytes
                       XXXXXX bytes free

 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of A:\

CORN     VEG          8 05-02-93   8:17p
RADISH   VEG         10 05-02-93   8:17p
POTATOES VEG         12 05-02-93   8:18p
       3 file(s)          30 bytes
                       XXXXXX bytes free

 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of A:\

LOPEZ    LET          9 05-02-93   8:13p
LETTER1               7 05-02-93   8:15p
LETTER2               7 05-02-93   8:16p
LOPEZ    RPT          9 05-02-93   8:19p
LOPEZ    MEM          9 05-02-93   8:21p
LETTER3               7 05-02-93   8:22p
       6 file(s)          48 bytes
                       XXXXXX bytes free
```

8 • **Go on** to Exercise 13
or **take** the disk out of drive A: and turn the computer off.

EXERCISE 13
TREE

Displays the directory structure on a disk.

OBJECTIVES:

- show the *directory structure* of the current directory
- identify paths to specific locations
- identify directory levels and branches
- show the *directory structure* of a different directory
- show the *directory structure* of a different disk drive
- show the *directory structure* one screenful at a time

– Terms and Notes –

directory
The part of the disk structure that holds files and/or other directories.

subdirectory
A directory that is within another directory (called the parent directory).

NOTE: Strictly speaking, all directories other than the **root directory** are **subdirectories**. But it is more common to call them **directories**. In this book, the term **subdirectory** is used only to show the relationship between two directories.

parent directory
The directory immediately above a subdirectory.

root directory
The main, first-level directory on a disk. The root directory is represented as:
\ in the path, and
A:. in the TREE command.

directory structure
The organization of directories on a disk.

directory branch
A directory and all of the levels of directories that are under it.

Directory structure

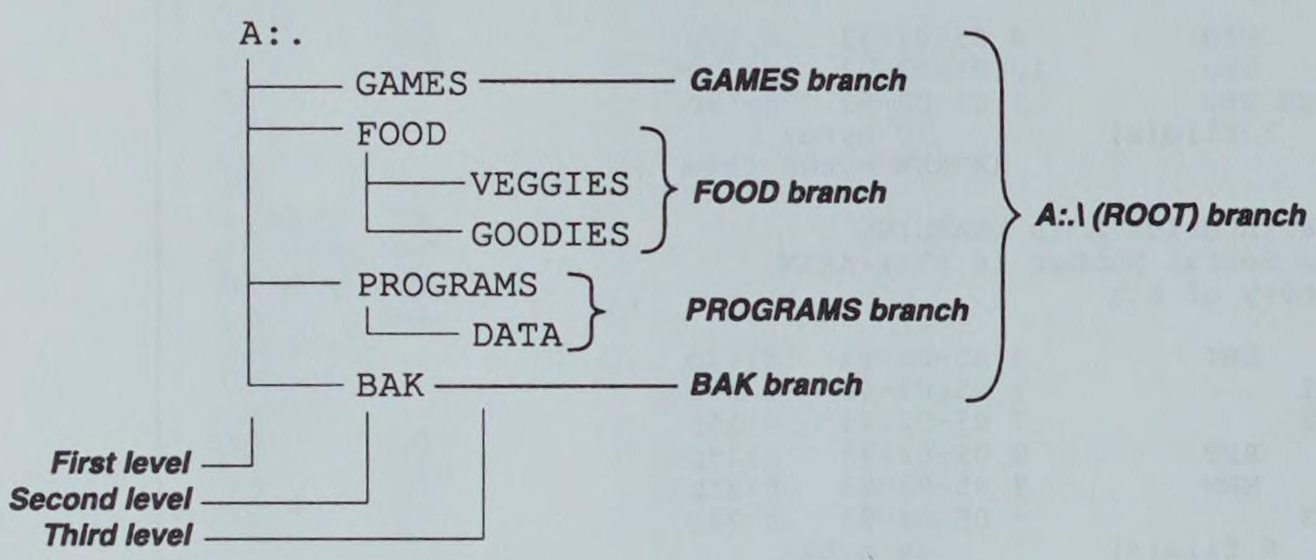
Every disk has a main directory called the **root directory**. The root directory is the *first-level* directory.

Other directories **branch** off the root directory like *limbs* on a **tree**. These *second-level* directories are *subdirectories* of the *root directory*, and the *root directory* is the **parent** of the second-level subdirectories.

Second-level directories can be **parents** to additional directories. These *third-level* directories are subdirectories of their *parent directory*.

The TREE command displays the **directory structure** of the **current directory's** branch. If the *current directory* is the *root directory*, TREE will display every directory on the disk.

Directory branches and levels



Telling DOS where to go

When you want to tell DOS how to get to a specific location in the *directory structure*, you must enter a **path**. For example, the **path** to files in the GOODIES directory is: \FOOD\GOODIES

*NOTE: The first backslash (\) represents the **root directory** (which the TREE command shows as A:.). Subsequent backslashes separate **directories** within the path.*

1 • If necessary, **access** the Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 **Display directory structure of current directory:**

• **Type** `TREE` ↵

```
Directory PATH listing for Volume LEARNING
Volume Serial Number is XXXX-XXXX
 A:.
   GAMES
   FOOD
      VEGGIES
      GOODIES
   PROGRAMS
      DATA
   BAK
```

***IMPORTANT**: TREE is an **external command**. If you get a **Bad command or file name** message, C:\DOS is not in the PATH command of your AUTOEXEC.BAT file. However, you can probably complete this exercise if you:*
***Type** PATH C:\DOS ↵ and repeat step 2 (see Exercise 66, page 168).*

Exercise 13 continued...

3 Understanding directory levels, branches, and paths:

- On a piece of paper:
  1. Write the **path** to the VEGGIES directory.
  2. Write the **path** to the DATA directory.
  3. Write the **level-one** directory.
  4. Write all the **level-two** directories.
  5. Write all the directories within the **FOOD branch**.
  6. Write all the directories within the **ROOT branch**.

  Check your answers in Appendix E.

  Examples:
  The **path** to GOODIES is: \FOOD\GOODIES
  The directory within the **PROGRAM branch** is: DATA
  The **level-three** directories are: VEGGIES, GOODIES, and DATA

4 Display directory structure of different directory:

- **Type** `TREE \FOOD` ↵

```
A:\FOOD
    VEGGIES
    GOODIES
```

5 Display directory structure of a different disk drive:

- **Type** `TREE C:\` ↵

  The directory structure scrolls past. Drive C: will probably have a tree structure that fills more than one screenful.

6 Display tree output one screenful at a time:

*NOTE: In this step, you will use the **pipe character** (|) and a **pipe command**, MORE. Since the MORE command sends **output** to a **file** on your disk before it displays the results on your screen, and since your disk may be write-protected, you will change to drive C: to do this step. While this piping command is very useful for displaying output one screenful at a time, piping will not be covered further in this book.*

- **Type** `C:` ↵ (to change to drive C:)

```
C:\>
```

- **Type** `TREE|MORE` ↵

  The first screenful appears with `-- More --` *at the bottom.*
- **Press** any key to get the next screenful.

  The next screenful appears with `-- More --` *at the bottom.*
- **Continue** pressing "any key" until the DOS prompt appears.

```
C:\>
```

- **Change** back to drive A: (review, Exercise 3).

```
A:\>
```

7

- **Go on** to Exercise 14
  or **take** the disk out of drive A: and turn the computer off.

Exercise 13 (continued)
TREE

directory levels
The tiers of directory levels, starting with the root directory as level one.

current directory
The directory you are in. (See the next exercise to learn how to change directories (CD).)

path
The list of directories that DOS goes through to find a directory or file.

pipe
The process in which the *output* of one command (or program) becomes the *input* for another command (or program).

MORE
The "pipe" command which displays one screenful of output at a time.

STEPS to

Display the directory structure of the current directory

- Type `TREE` ↵

Display the directory structure of a different directory

1 Type `TREE`
2 Type the path to the desired directory.
3 Press ↵

Display the directory structure on a different drive

1 Type `TREE`
2 Press Space
3 Type the desired drive.
  For example: `C:`
4 Press ↵

Display the directory structure one screenful at a time

- Type `TREE|MORE` ↵

EXERCISE 14
CD (change directory)

Changes directories or displays the *current* directory.

OBJECTIVES:

- display the *current* directory
- change to a *subdirectory* (one level down)
- change to a *parent* directory (one level up)
- change more than one directory *level* down at one time
- change to the *root* directory
- change from one directory *branch* to another

– Terms and Notes –

current directory
The directory you are "currently" working in. If your DOS prompt is changed to show the common prompt (that is, the **current drive and path** and the **greater-than sign**), then the last directory shown in the prompt is the *current* directory.

parent directory
The directory immediately above the *current* directory (or immediately above any particular subdirectory).

Changing Directories

You use CD (by itself) to *display* the *current directory*. To *change directories*, you must tell DOS what *directory* to change to. But realize that DOS cannot *change* to just *any* directory by using CD and the directory name—unless that directory is a *subdirectory*, you must show DOS the *path* to the desired directory.

DOS can move	using
- to a subdirectory	CD and the name of the subdirectory
- to a parent directory	CD..
- to the root directory	CD\
- to a different directory branch	CD\ and the *path from the root directory*, for example, \FOOD\GOODIES
- *down* more than one directory level	CD and the *path from the current* directory to the desired directory

*NOTE: You can **always** move to **any** directory (on the current disk drive) by typing CD and the **entire path** to the directory, starting with the **root** directory (\).*

Knowing Where You Are

Often you are not familiar with the *directory structure* you are working with. The *directory structure* on the Learning Disk is pretty simple. Study the Learning Disk's *directory structure* (page 38) so you will be more aware of where you are in the directory structure while doing this exercise. When working in directories, ASK YOURSELF THESE TWO QUESTIONS:

- What does the prompt say?
- What directory am I in?

1 • If necessary, **access** the Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 Display the current directory:

- **Type** `CD` ↵

NOTE: The current directory is the ROOT directory.

```
A:\
A:\>
```

3 Change to a subdirectory of the current directory:

(or move down one level in the directory structure)

- **Type** `CD FOOD` ↵

NOTE: FOOD is a subdirectory of the ROOT directory.

```
A:\FOOD>
```

- **Type** `CD GOODIES` ↵

NOTE: GOODIES is a subdirectory of FOOD.

```
A:\FOOD\GOODIES>
```

4 Change to the parent directory (..):

(or move up one level in the directory structure)

- **Type** `CD..` ↵

NOTE: FOOD is a parent directory of GOODIES.

```
A:\FOOD>
```

- **Type** `CD..` ↵

NOTE: The ROOT directory is a parent directory of FOOD.

```
A:\>
```

Exercise 14 continued...

❺ Change more than one directory level at a time:

- **Type** CD FOOD\GOODIES ↵

*NOTE: In order to move down multiple levels, you must name every directory in the path which leads from the **current directory** to the desired directory.*

```
A:\FOOD\GOODIES>
```

❻ Change to the root directory (\):

- **Type** CD\ ↵

NOTE: Simply type CD\ to move to the root directory from any other directory.

```
A:\>
```

❼ Change to a different directory branch:

(start path from the root directory)

First change to one directory branch:

- **Type** CD \FOOD ↵

```
A:\FOOD>
```

Now change to a different directory branch:

- **Type** CD \GAMES ↵

*NOTE: To move from one **branch** to another **branch**, you must start with the **root** directory, and type the entire path to the desired directory.*

```
A:\GAMES>
```

Now change to yet a different directory branch:

- **Type** CD \PROGRAMS ↵

```
A:\PROGRAMS>
```

❽

- **Change** to the *root* directory (review, step 6).

```
A:\>
```

❾ Change to the DATA directory:

- **Type** CD PROGRAMS\DATA ↵

NOTE: From the root directory, you can change to any directory by typing the path to the desired directory, starting with the subdirectory.

```
A:\PROGRAMS\DATA>
```

❿ Purposely change to an invalid directory:

- **Type** CD VEGGIES ↵

NOTE: You know you have a VEGGIES directory, but you have not given DOS enough information to find it, so DOS displays an "invalid directory" message.

```
Invalid directory
```

⓫ Now change to the VEGGIES directory correctly:

- **Type** CD \FOOD\VEGGIES ↵

NOTE: To change to a different directory branch, you must type the entire path, starting with the root directory.

```
A:\FOOD\VEGGIES>
```

Exercise 14 continued...

WARNING: If you know where you are within the directory structure, you can use the CD command to move down one or more levels by entering the path **from the current directory**. But, if you are not sure where you are when using the CD command, it is best to use the entire path **from the root directory** to the desired location. Using the path starting **from the root directory** always works.

STEPS to

Change to a subdirectory

1 Type CD
2 Press Space
3 Type the subdirectory name.
4 Press ↵

Change to the parent directory

- Type CD.. ↵

Change to the root directory

- Type CD\ ↵

Change to a directory more than one level down

1 Type CD
2 Press Space
3 Type the subdirectory name.
4 Type \
5 Type the next directory name.
6 Repeat steps 4 and 5 until path is complete.
7 Press ↵

Change to a directory in a different branch

1 Type CD\
2 Type the first directory in the path.
3 Type \
4 Type the next directory in the path.
5 Repeat steps 3 and 4 until path is complete.
6 Press ↵

12 • **Change** to the *parent* directory (review, step 4).

```
A:\FOOD>
```

13 **Change to the GAMES directory:**

• **Type** CD \GAMES ↵

```
A:\GAMES>
```

14 • **Change** to the *root* directory (review, step 6).

```
A:\>
```

15 • **Change** to the FOOD subdirectory (review, step 3).

```
A:\FOOD>
```

16 • **Type** TREE ↵
(to get a picture of just the FOOD directory branch)

NOTE: Just as GAMES, FOOD, AND PROGRAMS are ***branches*** *of the ROOT directory, VEGGIES and GOODIES are* ***branches*** *of the FOOD directory.*

```
A:.
   VEGGIES
   GOODIES
```

17 • **Change** to the GOODIES subdirectory (review, step 3).

```
A:\FOOD\GOODIES>
```

18 • **Change** to the *parent* directory (review, step 4).

```
A:\FOOD>
```

19 • **Change** to the VEGGIES subdirectory (review, step 3).

```
A:\FOOD\VEGGIES>
```

20 • **Use** the CLS command to clear the screen.

```
A:\FOOD\VEGGIES>
```

21 • **Display** the *current* directory (review, step 2).

```
A:\FOOD\VEGGIES
A:\FOOD\VEGGIES>
```

22 • **Change** to the *root* directory (review, step 6).

```
A:\>
```

23 • **Go on** to Exercise 15
or **take** the disk out of drive A: and turn the computer off.

New ways to use DIR

Now that you are familiar with:
- the DIR command,
- the CD (change directory) command,
- the *directory structure*, and
- paths,

you can use the DIR command to examine files in directories *other* than the *root directory*.

Telling DIR where to work

You tell DIR where to work by pointing DOS to the *directory* you want it to *list*. You type DIR followed by the *path* to the desired directory.

For example: from the *root* directory, you can tell DOS to *list* the contents of the DATA directory by typing: `DIR PROGRAMS\DATA` ↵

Or from the VEGGIES directory, you can tell DOS to *list* the contents of the DATA directory by typing: `DIR \PROGRAMS\DATA` ↵

NOTE: In this second example, since the root directory is not current, you must tell DOS to start its search from the root directory by typing \ at the beginning of the path.

Unless you point DOS to a different directory, DOS will work in the *current directory*.

Automatically created directories

When a new directory is created, DOS automatically creates two directories within the new directory:

1. a *current* directory, represented by a single dot (.), and
2. a *parent* directory, represented by two dots (..).

These two directories are used by DOS to help keep track of the directory structure (i.e., to help DOS find the directories you point it to). You do not have to be concerned about them.

1 • If necessary, **access** the Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 • **Change** to the VEGGIES directory (review, Exercise 14).

```
A:\FOOD\VEGGIES>
```

3 **List the contents of the VEGGIES directory:**

• **Type** `DIR` ↵

*DOS lists the **current** directory, the **parent** directory and five files. DOS adds the directories and files together and tells you that there are 7 file(s) in the directory.*

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of A:\FOOD\VEGGIES

.            <DIR>      05-02-93   8:27p
..           <DIR>      05-02-93   8:27p
CABBAGE  VEG           11 05-02-93   8:47p
CARROTS  VEG           11 05-02-93   8:47p
KALE     VEG            8 05-02-93   8:47p
LETTUCE  VEG           11 05-02-93   8:47p
CELERY   VEG           10 05-02-93   8:48p
        7 file(s)             51 bytes
                       XXXXXX bytes free
```

current directory →
parent directory →
five files →
7 files

Exercise 15 continued...

EXERCISE 15
More DIR

This exercise combines the DIR command with different *paths* and *drives* to let you examine any directory on any disk drive in your computer system.

OBJECTIVES:
- list the contents of a *current* directory that is not the root directory
- list the contents of a *subdirectory* of the *current* directory
- list the contents of a directory in a different *branch*
- list the contents of a directory on a *disk drive* that is not *current*

STEPS to

List files on current directory
1 Change to the desired directory.
2 Type `DIR` ↵

List files on a subdirectory
1 Type `DIR`
2 Press Space
3 Type the subdirectory name.
4 Press ↵

List files on a different drive
1 Type `DIR`
2 Press Space
3 Type the desired drive.
4 Press ↵

List files in a specific directory on a different drive
1 Type `DIR`
2 Press Space
3 Type the desired drive.
4 Type the path to the desired directory.
5 Press ↵

WARNING: If you know where you are in the **directory structure**, you can start your **path** from the **current** directory and go down one or more levels. However, it is safer to start your **path** with the **root** directory.

- Starting a **path** from the **current** directory saves extra typing, but
- starting a **path** from the **root** directory always works, no matter where you are in the directory structure.

4 • **Change** to the *parent* directory of VEGGIES (review, Exercise 14).

```
A:\FOOD >
```

5 List the contents of the FOOD directory:

• **Type** DIR ↵

*DOS lists the **current directory** (.), the **parent directory** (..) and two **subdirectories** of FOOD (VEGGIES and GOODIES).*

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of A:\FOOD

.            <DIR>      05-02-93   7:46p
..           <DIR>      05-02-93   7:46p
VEGGIES      <DIR>      05-02-93   8:27p
GOODIES      <DIR>      05-02-93   8:28p
       4 file(s)              0 bytes
                        XXXXXX bytes free
```

6 • **Change** to the *root* directory (review, Exercise 14).

```
A:\>
```

• **Type** DIR/P ↵

The first screenful of files appears.

• **Press** any key.

The second (and last) screenful of files appears and the DOS prompt is displayed.

```
A:\>
```

7 List the contents of a subdirectory:

*NOTE: You should be in the **root** directory with this DOS prompt showing: **A:\>** Since the root directory is current, you do not need to start the path with \.*

• **Type** DIR GAMES ↵

*DOS list the **current** and **parent** directories again (every directory except the **root** directory has these two directories) and three files.*

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of A:\GAMES

.            <DIR>      05-02-93   7:46p
..           <DIR>      05-02-93   7:46p
ASTRO    GAM          9 05-02-93   8:48p
CHESS    GAM          9 05-02-93   8:48p
JEOPARDY GAM         12 05-02-93   8:49p
       5 file(s)             30 bytes
                        XXXXXX bytes free
```

• **Type** DIR BAK ↵

*This directory is empty except for the **current** and **parent** directories.*

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of A:\BAK

.            <DIR>      05-22-93   8:43p
..           <DIR>      05-22-93   8:43p
       2 file(s)              0 bytes
                        XXXXXX bytes free
```

Exercise 15 continued...

❽ List the contents of a directory in a different branch:

- **Change** to the FOOD subdirectory (review, Exercise 14).

```
A:\FOOD>
```

- **Type** `DIR \GAMES` ↵

*NOTE: When pointing DOS to a **different branch**, you must begin the path with \ (the root directory).*

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of A:\GAMES

.            <DIR>      05-02-93   7:46p
..           <DIR>      05-02-93   7:46p
ASTRO    GAM            9 05-02-93   8:48p
CHESS    GAM            9 05-02-93   8:48p
JEOPARDY GAM           12 05-02-93   8:49p
       5 file(s)          30 bytes
                       XXXXXX bytes free
```

- **Type** `DIR \PROGRAMS\DATA` ↵

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of A:\PROGRAMS\DATA

.            <DIR>      05-22-93   8:43p
..           <DIR>      05-22-93   8:43p
MEMBER   DB             9 05-25-93   9:28p
CLUB     DB             7 05-25-93   9:29p
MUSIC    DB             8 05-25-93   9:29p
REPORT   DOC           10 05-25-93   9:30p
SCRIPT   DOC           10 05-25-93   9:30p
PAYROLL  WK            10 05-25-93   9:31p
SALES    WK             8 05-25-93   9:31p
AGENDA   DOC           10 05-25-93   9:32p
GRADES   WK             9 05-25-93   9:32p
      11 file(s)          81 bytes
                       XXXXXX bytes free
```

❾ List the contents of the root directory on drive C:

- **Type** `DIR C:\` ↵

The filenames scroll past on the screen, and the last item to appear is the DOS prompt for drive A:.

```
A:\FOOD>
```

❿ List the contents of the DOS directory on drive C:

- **Type** `DIR C:\DOS` ↵

Again, the filenames scroll past on the screen, and the last item to appear is the DOS prompt for drive A:.

```
A:\FOOD>
```

⓫ Print a list of the DOS directory on drive C:

- **Make sure** that the printer is ready to receive data.
- **Type** `DIR C:\DOS>PRN` ↵

The first page is printed and ejected from the printer.

- **Force** the second page out (review, Exercise 12, step 4).

⓬ • **Change** to the *root* directory (review, Exercise 14).

```
A:\>
```

⓭ • **Go on** to Exercise 16
or **take** the disk out of drive A: and turn the computer off.

sending DIR to a different disk drive
You can point DOS to a different drive by typing the desired drive in front of the *path*.

For example:

From drive A:, you can tell DOS to *list* the contents of the *DOS* directory on drive C: by typing:

`DIR C:\DOS` ↵

NOTE: Since drive A: remains the **current** drive, the DOS prompt returns to drive A: after the command has been carried out.

EXERCISE 16
Practice

LESSON TWO
Exploring Directories

OBJECTIVE:

- with Exercise 17, review the following tasks from the exercises in Lesson Two:

  DIR—list contents of directory
  DIR and switches
  DIR and switches with options
  DIR and wildcards
  Redirect output to the printer
  Force printer to eject your paper
  TREE—display directory structure

  CD—change directory
  display the current directory
  change to a subdirectory
  change to the parent directory
  change to the root directory
  change more than one directory level
  change to a different directory branch

  More DIR
  list current directory
  list a subdirectory
  list a different branch
  list a different drive
  list a specific directory on a different drive

Hints

The bolded term at the beginning of each exercise step gives a clue about the command that should be used to complete the step. For example:

bolded term	command used
List	DIR
Change	CD
Display	TREE or CD
Redirect	>PRN

The commands to perform each step are listed in Appendix F. Try to complete the exercise without looking at the Appendix for help.

1. If necessary, **access** the Learning Disk on drive A:, and **change** to this common DOS prompt: `A:\>`

2. **List** the contents of the *current* directory (it should be the root) of the Learning Disk.

3. **List** the contents of the *root* directory on drive C:.

4. **List** the *current* directory, pausing after each screenful.

5. **List** the *current* directory wide.

```
[GAMES]       [FOOD]        [PROGRAMS]    JONES.LET        [BAK]
SMITH.LET     LOPEZ.LET     LETTER1       REPORT3          LETTER2
CLUE.GAM      CORN.VEG      RADISH.VEG    POTATOES.VEG     PUDDING.DES
LOPEZ.RPT     REPORT1       SMITH.RPT     SMITH.MEM        TRIVIA.GAM
MEMO3         LOPEZ.MEM     LETTER3       JONES.MEM        JONES.RPT
JELLO.DES     OLDMAID.GAM   MEMO1         MEMO2            REPORT2
HELLO         HURRAH        NOT
            33 file(s)          430 bytes
                          XXXXXX bytes free
```

6. **Change** *more than one directory level* to the DATA directory.

```
A:\PROGRAMS\DATA>
```

7. **List** the contents of the DATA directory.

```
.            <DIR>      05-22-93   8:43p
..           <DIR>      05-22-93   8:43p
MEMBER   DB          9  05-25-93   9:28p
CLUB     DB          7  05-25-93   9:29p
MUSIC    DB          8  05-25-93   9:29p
REPORT   DOC        10  05-25-93   9:30p
SCRIPT   DOC        10  05-25-93   9:30p
PAYROLL  WK         10  05-25-93   9:31p
SALES    WK          8  05-25-93   9:31p
AGENDA   DOC        10  05-25-93   9:32p
GRADES   WK          9  05-25-93   9:32p
      11 file(s)          81 bytes
                    XXXXXX bytes free
```

8. **List** the DATA directory in ORDER.

```
AGENDA   DOC        10  05-25-93   9:32p
CLUB     DB          7  05-25-93   9:29p
GRADES   WK          9  05-25-93   9:32p
MEMBER   DB          9  05-25-93   9:28p
MUSIC    DB          8  05-25-93   9:29p
PAYROLL  WK         10  05-25-93   9:31p
REPORT   DOC        10  05-25-93   9:30p
SALES    WK          8  05-25-93   9:31p
SCRIPT   DOC        10  05-25-93   9:30p
      11 file(s)          81 bytes
 ↑                  XXXXXX bytes free
```

9. **List** the DATA directory in ORDER by the *size* option.

```
CLUB     DB          7  05-25-93   9:29p
MUSIC    DB          8  05-25-93   9:29p
SALES    WK          8  05-25-93   9:31p
MEMBER   DB          9  05-25-93   9:28p
GRADES   WK          9  05-25-93   9:32p
REPORT   DOC        10  05-25-93   9:30p
SCRIPT   DOC        10  05-25-93   9:30p
PAYROLL  WK         10  05-25-93   9:31p
AGENDA   DOC        10  05-25-93   9:32p
      11 file(s)  ↑       81 bytes
                    XXXXXX bytes free
```

Exercise 16 continued...

10 **List** the files which end with .DOC.

```
REPORT   DOC          10 05-25-93   9:30p
SCRIPT   DOC          10 05-25-93   9:30p
AGENDA   DOC          10 05-25-93   9:32p
       3 file(s)           30 bytes
                    XXXXXX bytes free
```

11 **List** the files which begin with M.

```
MEMBER   DB           9 05-25-93   9:28p
MUSIC    DB           8 05-25-93   9:29p
       2 file(s)           17 bytes
                    XXXXXX bytes free
```

12 **Change** to the *root* directory.

```
A:\>
```

13 **Display** the *directory structure.*

```
Directory PATH listing for Volume LEARNING
Volume Serial Number is XXXX-XXXX
 A:.
   ├───GAMES
   ├───FOOD
   │   ├───VEGGIES
   │   └───GOODIES
   ├───PROGRAMS
   │   └───DATA
   └───BAK
```

14 **Change** *more than one directory level* to the GOODIES directory.

```
A:\FOOD\GOODIES
```

15 **List** the *current* directory.

```
SAME AS STEP 17
```

16 **Redirect** the **list** of the current directory to the printer.

17 **Force** the printer to eject your paper.

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of A:\FOOD\GOODIES

.            <DIR>      05-02-93   8:28p
..           <DIR>      05-02-93   8:28p
CAKE     DES            8 05-02-93   8:45p
COOKIES  DES           11 05-02-93   8:46p
ICECREAM DES           12 05-02-93   8:46p
PIE      DES            7 05-02-93   8:46p
       6 file(s)           38 bytes
                    XXXXXX bytes free
```

18 **Change** to the *root* directory.

```
A:\>
```

19 **Go on** to Exercise 17
or **take** the disk out of drive A: and turn the computer off.

EXERCISE 17
Practice

LESSON TWO
Exploring Directories

OBJECTIVE:

- with Exericse 16, review the following tasks from the exercises in Lesson Two:

DIR—list contents of directories
DIR and switches
DIR and switches with options
DIR and wildcards
Redirect output to the printer
Force printer to eject your paper
TREE—display directory structure

CD—change directory
display the current directory
change to a subdirectory
change to the parent directory
change to the root directory
change more than one directory level
change to a different directory branch

More DIR
list current directory
list a subdirectory
list a different branch
list a different drive
list a specific directory on a different drive

Hints

The bolded term at the beginning of each exercise step gives a clue about the command that should be used to complete the step. For example:

bolded term	command used
List	DIR
Change	CD
Display	TREE or CD
Redirect	>PRN

1 If necessary, **access** the Learning Disk on drive A:, and **change** to this common DOS prompt: `A:\>`

2 **Change** *more than one directory level* to the VEGGIES directory.

```
A:\FOOD\VEGGIES>
```

3 **Display** the *directory structure.*

```
A:\FOOD\VEGGIES
A:\FOOD\VEGGIES>
```

4 **List** the *current* directory.

```
.            <DIR>      05-02-93   8:27p
..           <DIR>      05-02-93   8:27p
CABBAGE  VEG          11 05-02-93   8:47p
CARROTS  VEG          11 05-02-93   8:47p
KALE     VEG           8 05-02-93   8:47p
LETTUCE  VEG          11 05-02-93   8:47p
CELERY   VEG          10 05-02-93   8:48p
       7 file(s)            51 bytes
                     XXXXXX bytes free
```

5 **Redirect** a **list** of the *current* directory to the printer. Do not force the printer to eject your paper yet (your printer may automatically eject your paper).

6 **List** the contents of a *different branch*—GOODIES.

NOTE: Even though VEGGIES and GOODIES are both within the FOOD branch, they begin separate branches as they branch off the FOOD directory.

```
.            <DIR>      05-02-93   8:28p
..           <DIR>      05-02-93   8:28p
CAKE     DES           8 05-02-93   8:45p
COOKIES  DES          11 05-02-93   8:46p
ICECREAM DES          12 05-02-93   8:46p
PIE      DES           7 05-02-93   8:46p
       6 file(s)            38 bytes
                     XXXXXX bytes free
```

7 While still in the VEGGIES directory, **redirect** the **list** of the GOODIES directory to the printer. *HINT: The first part is just like step 6.*

8 **Force** the printer to eject your paper.

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of A:\FOOD\VEGGIES

.            <DIR>      05-02-93   8:27p
..           <DIR>      05-02-93   8:27p
CABBAGE  VEG          11 05-02-93   8:47p
CARROTS  VEG          11 05-02-93   8:47p
KALE     VEG           8 05-02-93   8:47p
LETTUCE  VEG          11 05-02-93   8:47p
CELERY   VEG          10 05-02-93   8:48p
       7 file(s)            51 bytes
                     XXXXXX bytes free

 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of A:\FOOD\GOODIES

.            <DIR>      05-02-93   8:28p
..           <DIR>      05-02-93   8:28p
CAKE     DES           8 05-02-93   8:45p
COOKIES  DES          11 05-02-93   8:46p
ICECREAM DES          12 05-02-93   8:46p
PIE      DES           7 05-02-93   8:46p
       6 file(s)            38 bytes
                     XXXXXX bytes free
```

Exercise 17 continued...

9 **Change** to the *parent* directory.

```
A:\FOOD>
```

10 **Change** to the *parent* directory again (it is the root directory).

```
A:\>
```

11 **List** a *subdirectory* of the root directory—BAK.

```
.            <DIR>      05-22-93   8:43p
..           <DIR>      05-22-93   8:43p
       2 file(s)              0 bytes
                        XXXXXX bytes free
```

12 **List** a *subdirectory* of the root directory—FOOD.

```
.            <DIR>      05-02-93   7:46p
..           <DIR>      05-02-93   7:46p
VEGGIES      <DIR>      05-02-93   8:27p
GOODIES      <DIR>      05-02-93   8:28p
       4 file(s)              0 bytes
                        XXXXXX bytes free
```

13 **Change** to the PROGRAMS *subdirectory* of the root directory.

```
A:\PROGRAMS>
```

14 **List** the contents of a *different branch*—BAK.

```
SAME AS STEP 11
```

15 **List** the contents of a *different branch*—FOOD.

```
SAME AS STEP 12
```

16 **Change** to a *different branch*—FOOD.

```
A:\FOOD>
```

17 **Display** the *directory structure.*

```
A:.
    VEGGIES
    GOODIES
```

18 **Change** to the *root* directory.

```
A:\>
```

19 **List** the files on a *different drive*—C:.

The files flash by, and the last item to appear is the DOS prompt for drive A:.

20 **List** the files in a *specific directory* on a *different drive*—the DOS directory on drive C:.

The files flash by, and the last item to appear is the DOS prompt for drive A:.

21 **Go on** to Worksheet 7.

If desired, **take** the disk out of drive A: and turn the computer off.

WORKSHEET 7

EXERCISES 8, 9, 10, 11, and 12

NAME _____

DIRECTIONS: Use the following terms to fill in the blanks below.

PRN	wildcards	DIR (directory)	DIR and switches with options
switch	directory	DIR and switches	Redirect output to the printer
output	scrolling	DIR and wildcards	
redirect	switch option		

1. The DOS command that displays a list of files and/or directories in a directory. 1. _____

2. To use *wildcards* with the DIR command to list certain *groups of files* within a directory. 2. _____

3. To vary the way a *switch* changes the DIR command by adding an *option* at the end of the switch. 3. _____

4. Symbols that represent a character or group of characters and are used to help you select specific *groups of files*.
   * represents a *group of characters* and ? represents any *single character*. 4. _____

5. An optional code at the end of a command that directs the command to vary in a 5. _____

6. The *result* of your DOS command that is normally displayed on the screen. 6. _____

7. An optional code at the end of a *switch* that begins with a colon (:) and provides information that changes a *switch* in a specific way. 7. _____

8. To use a code to tell DOS to send the *output* of your command to the *printer* rather than the *screen*. 8. _____

9. DOS's name for the printer. 9. _____

10. The vertical movement of files on the screen. 10. _____

11. To change the place a command *gets information from* or *sends information to*. 11. _____

12. The part of the disk structure that holds *files* and/or other *directories*. 12. _____

13. To change the way DOS *normally* displays the contents of a directory by adding a *switch* to the end of the DIR command. 13. _____

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WORKSHEET 8

EXERCISES 13, 14, and 15

NAME _____

DIRECTIONS: Use the following terms to fill in the blanks below.

path	directory	directory branch	current directory	MORE
TREE	root directory	directory levels	directory structure	pipe character
More DIR	subdirectory	parent directory	CD (change directory)	

1. The DOS command that displays the directory structure of a disk. 1. _____

2. This exercise combines the DIR command with different paths and drives to let you examine any directory on any disk drive in your computer system. 2. _____

3. A directory that is within another directory (called the parent directory). 3. _____

4. The route to a specific location in DOS's system of directories. 4. _____

5. The part of the disk structure that holds files and/or other directories. 5. _____

6. The directory immediately above the *current* directory (or immediately above any particular subdirectory). 6. _____

7. The main (first level) directory on a disk. 7. _____

8. The DOS command to change the *current* directory. 8. _____

9. A directory and all of the levels of directories that are under it. 9. _____

10. The tiers of subdirectory layers, starting with the root directory as level one. 10. _____

11. The organization of directories on a disk. 11. _____

12. The directory you are working in. 12. _____

13. The "pipe" command which displays one screenful of output at a time. 13. _____

14. The process in which the *output* of one command (or program) becomes the *input* for another command (or program). 14. _____

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WORKSHEET 9

NAME _____

LESSON TWO, Questions and Commands

1. What command lists files and/or directories? 1. _____
2. What optional code changes the way a command normally works? 2. _____
3. What command displays the directory structure on a disk? 3. _____
4. What command changes directories? 4. _____

WHAT IS THE DOS COMMAND TO:

5. List the contents of the current directory. 5. _____
6. List the contents of a *subdirectory* named DATA. 6. _____
7. List the contents of the current directory, pausing at the end of each screenful. 7. _____
8. List the contents of the current directory in wide format. 8. _____
9. List the contents of the current directory using the order switch. 9. _____
10. List the contents of the current directory in *order* of date from last to first. 10. _____
11. List the *group of files* that begin with M. 11. _____
12. List the *group of files* in the current directory that end with the extension .DOC. 12. _____
13. List the *group of files* in the current directory that begin with L and have the extension .TXT. 13. _____
14. Redirect a list of the contents of the current directory to the printer. 14. _____
15. Redirect a list of the group of files in the current directory that begin with S to the printer. 15. _____
16. Display the directory structure in the current directory. 16. _____
17. Display the directory structure of a *subdirectory* named FOOD. 17. _____
18. Change directory to a *subdirectory* named GOODIES. 18. _____
19. Change directory to the *parent* directory. 19. _____
20. Change directory to the *root* directory. 20. _____

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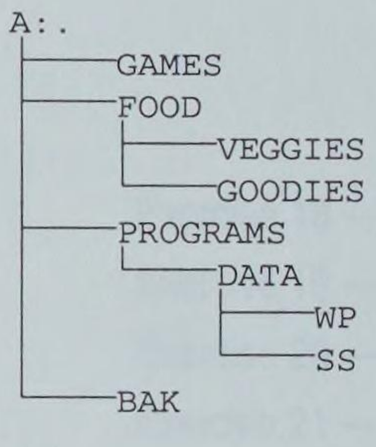
WORKSHEET 10

LESSON TWO, Questions and Commands

NAME _____

Use the following *directory structure* for commands 1 through 8 below.
NOTE: This directory structure has two directories not on the Learning Disk (WP and SS).



WHAT IS THE COMMAND TO:

1. Change directory from FOOD to GAMES. 1. _____

2. Change directory from DATA to GOODIES. 2. _____

3. Change directory (*down* more than one level) from PROGRAMS to WP. 3. _____

4. Change directory (to a different branch) from WP to SS. 4. _____

5. Change directory from VEGGIES to GOODIES. 5. _____

6. With FOOD the *current* directory, list the files in the GOODIES directory. 6. _____

7. With FOOD the *current* directory, list the files in the GAMES directory. 7. _____

8. With PROGRAMS the *current* directory, list the files in the SS directory. 8. _____

9. With drive A: current, list the files in drive C:. 9. _____

10. With drive A: current, list the files in the *root* directory on drive C:. 10. _____

11. With drive A: current, list the files in the DOS directory on drive C:. 11. _____

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DOS Lesson Three
Frequently Used DOS Commands

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EXERCISE 18
DISKCOPY

Copies the entire contents of a floppy disk (the *source* disk) onto another floppy disk (the *target* disk).

OBJECTIVES:

- identify the DISKCOPY guidelines
- write-protect your original disk
- use DISKCOPY to duplicate the Learning Disk
- use the verify switch with DISKCOPY
- label your duplicate disk

– Terms and Notes –

NOTE: You can use either a formatted or unformatted disk with the DISKCOPY command.

NOTE: DISKCOPY works only on removable disks (not the hard disk).

WARNING: When you use DISKCOPY, any existing data on the **target** disk will be destroyed.

external command
A DOS command that is stored in a file and that is accessible only if it can be reached on the disk and directory on which it is stored.

source disk
The disk to copy from when doing a DISKCOPY.

target disk
The disk to copy to when doing a DISKCOPY.

verify switch (/v)
An optional addition to the DISKCOPY command that tells DOS to compare the source and target disks during the copy.

write-protect
To use a procedure that will protect a disk from being changed in any way while still allowing you to read the information on the disk.

write-protect tab
A small, self-adhesive tab that often comes packaged with disk labels and is used to cover the write-enable notch on a 5¼" floppy disk.

Duplicate Learning Disk

For this exercise you need to provide a disk that matches the Learning Disk in size and density. You will copy the Learning Disk to your disk and name it Duplicate Learning Disk. You will make many changes on the Duplicate Learning Disk in Lesson Three, but they are *not* permanent changes since you will recopy the original Learning Disk to the Duplicate Learning Disk at the end of Lesson Three.

Why use DISKCOPY?

When you purchase new software, it is a good idea to use DISKCOPY to make duplicate copies so you have a "back up" in case one set of software becomes damaged.

DISKCOPY guidelines

- The *target* disk must be the **same size** and **density** as the *source* disk.
- It is advisable to **write-protect** the original disk before starting the DISKCOPY procedure, because it is easy to accidentally switch the source and target disks, which can ruin the data on your original disk.

❶ Write-protect the ORIGINAL Learning Disk:

- 3½" disk: **Slide** the *write-protect* tab so that it is open.
  OR
- 5¼" disk: **Place** a *write-protect tab* over the notch on the side.

❷

- **Access** the Learning Disk on drive A: and **change** to this common DOS prompt: A:\> (if necessary).

❸ Start the DISKCOPY procedure:

*IMPORTANT: DISKCOPY is an **external command**. If you get a **Bad command or file name** message, C:\DOS is not in the PATH command of your AUTOEXEC.BAT file. However, you can probably complete this exercise if you type PATH C:\DOS ↵ and repeat step 3 (see Exercise 66, page 168).*

- **Type** `DISKCOPY A: A: /V` ↵
  *NOTE: You can use the **verify** switch (/V) to confirm that the source and destination disks are identical, but it is not necessary and it slows down the DISKCOPY process.*

```
Insert the SOURCE disk in drive A:

Press any key to continue . . .
```

❹ Follow the DISKCOPY prompts:

- **Place** the original Learning Disk in drive A: (it should already be there).
  NOTE: The original Learning Disk is either:
  an HD (1.44MB) 3½" floppy disk or
  an HD (1.2MB) 5¼" floppy disk
- **Press** any key to start copying.

```
Copying XXX tracks
XX sectors per track, 2 side(s)

Insert TARGET diskette in drive A:

Press any key to continue . . .
```

- **Place** the *target* disk in drive A:.
  NOTE: The target disk must be the same size and density as the original—either:
  an HD (1.44MB) 3½" floppy disk or
  an HD (1.2MB) 5¼" floppy disk

Exercise 18 continued...

- **Press** any key to continue.
- **Continue** exchanging the *source* and *target* disks as prompted.
  NOTE: If you are copying a DD 5¼" disk, you will not have to exchange disks further. If you are copying any other density and size disk, you will have to exchange disks again. Since DOS can store only 640K of information in its memory at one time, it has to do the DISKCOPY job (moving data back and forth between memory and disks) in pieces. (See DOS 6.2 note in the side column.)
- When the copy is complete, DOS displays this message:

```
Volume Serial Number is XXXX-XXXX
Copy another diskette (Y/N)?
```

NOTE: The only thing that DISKCOPY does not copy exactly is the volume serial number. If the source disk has a volume serial number, DOS creates a new one for the destination disk and displays that number when DISKCOPY is complete.

5 End the DISKCOPY procedure:

- **Type** N

```
A:\>
```

6 Label the DUPLICATE Learning Disk:

- **Remove** the new disk from drive A:.
- **Write** information about the disk on a label:
  Disk Name: Duplicate Learning Disk
  Date: Today's date
  Name: Your name (if you are in a class)
- **Place** the label on the disk.
  NOTE: If you place the label on a 5¼" disk before the label is filled out, use a felt-tip pen to write on label so you won't damage the disk.
- **Place** the DUPLICATE Learning Disk back in drive A:.

7 Change to drive A:

- **Change** to the root directory (review, Exercise 14).

```
C:\>
```

- **Change** to drive A: (review, Exercise 4).

```
A:\>
```

8 List the files and display the directory structure on the disk:

- **Type** DIR/P ↵
  The first screenful of files appears. Do the files match those on the Learning Disk?
- **Press** any key.
  The last screenful of files appears.
- **Type** TREE ↵

```
Directory PATH listing for Volume LEARNING
Volume Serial Number is XXXX-XXXX
A:.
    GAMES
    FOOD
        VEGGIES
        GOODIES
    PROGRAMS
        DATA
    BAK
```

9

- **Go on** to Exercise 19
  or **take** the disk out of drive A: and turn the computer off.

Exercise 18 (continued) DISKCOPY

DOS 6.2 NOTE: Because DOS 6.2 uses hard disk space when copying floppy disks, it does not require multiple disk swaps, even with disks that have capacities greater than 360K.

STEPS to

Copy a disk

1 Select one way to Diskcopy:

From drive A: to drive A:
- **Type** DISKCOPY A: A: ↵

From drive B: to drive B:
- **Type** DISKCOPY B: B: ↵

From drive A: to drive B:
- **Type** DISKCOPY A: B: ↵
  NOTE: If drive A: and drive B: are the same size, you can copy a disk from one drive to another without switching disks.

2 Follow the prompts carefully.

EXERCISE 19
COPY a file to the same directory

COPY is the DOS command that duplicates file(s). When you copy a file to the same directory as the original file, you *must* give the duplicate file a new filename.

OBJECTIVES:

- use DIR to check files before and after copying
- copy one file from the *current* directory to the *current* directory, renaming the duplicate file

– Terms and Notes –

WARNING: You can lose data when copying. If the name you assign the duplicate file is the same as an existing file, DOS will **overwrite the existing file with the new file** without warning you (except for DOS 6.2 – see note below).

DOS 6.2 NOTE: Unlike earlier versions of DOS, DOS 6.2 warns you and asks for your confirmation before overwriting a file with the same filename as the one you are copying.

overwrite a file
To replace the contents of one file with the contents of another file.

STEPS to

Copy a file from the current directory to the current directory

1 Type COPY
2 Press Space
3 Type the filename to copy.
4 Press Space
5 Type the new filename.
6 Press ↵

Why copy files?

- To make a *backup* file in case the original is damaged.
- To use files on a different computer.
- To put your files on the faster hard disk to speed up your work.
- To create a file based on the contents of another file.

Copying a file to the same directory

Because a directory cannot have two files with the same name, when you copy a file from one directory to the *same* directory you must give the duplicate file a new name. You assign the new name when you type the COPY command. For example:

```
COPY  JONES.LET  JONES.BAK
 ↑       ↑         ↑
command  original filename  new filename
```

NOTE: You may want to read Topic 11 (pp. 80-81) before doing the COPY exercises (19, 20, and 21). The section, "Some commands require two sets of parameters" (p. 81) may be especially useful.

❶ Use the DUPLICATE Learning Disk created with DISKCOPY:

*NOTE: Do not **write-protect** the DUPLICATE Learning Disk since write-protection keeps a disk from being changed in any way, and this lesson asks you to make changes.*

- If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: A:\>

❷ List the files with JONES filenames to check them:

- **Type** DIR JONES.* ↵

```
JONES    LET          9 05-02-93   7:48p
JONES    MEM          9 05-02-93   8:22p
JONES    RPT          9 05-02-93   8:23p
       3 file(s)          27 bytes
                      XXXXXX bytes free
```

*NOTE: Using DIR **before** and **after** copying files gives you a better sense of what files you have and the results of your command.*

❸ Copy JONES.LET to JONES.BAK:

- **Type** COPY JONES.LET JONES.BAK ↵

DOS reports a successful copy.

```
1 file(s) copied
```

❹ Check to see that the new file is there:

- **Type** DIR JONES.* ↵

```
JONES    LET          9 05-02-93   7:48p
JONES    MEM          9 05-02-93   8:22p
JONES    RPT          9 05-02-93   8:23p
JONES    BAK          9 05-02-93   7:48p
       4 file(s)          36 bytes
                      XXXXXX bytes free
```

NOTE: When a file is copied, the new file keeps the same date and time as the original file. Since JONES.BAK arrived on the disk last, DOS lists it below the other files.

- **Type** DIR ↵

The filenames flash past, but you can see that the last file listed is JONES.BAK.

❺

- **Go on** to Exercise 20
  or **take** the disk out of drive A: and turn the computer off.

Copying a group of files to the same directory

Copying a *group of files* to the *same* directory is different than copying just one file to the *same* directory because:

- instead of typing an original *filename* and a new *filename*,
- you type an original **filename pattern** and a new **filename pattern** (which identify the group of files you want to copy).

For example:

```
COPY  *.GAM  *.BAK
 ↑     ↑      ↑
command  original  new
         filename  filename
         pattern   pattern
```

A **filename pattern** represents a group of files that have some filename parts that are the same, and some filename parts that are different. **Filename patterns** use **wildcards** to represent the parts of the filenames that are different and **characters** to represent the parts of the filename that are the same. For example, in `*.GAM`, the **wildcard** (*) represents the part of the filename which is different for each file in a group, and the characters, .GAM, represent the part of the filename that is the same for each file in the group.

1

- If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 **Copy the files with .GAM extensions to files with .BAK extensions:**

- **Type** `DIR *.GAM` ↵

```
CLUE     GAM          8 05-02-93    8:17p
TRIVIA   GAM         10 05-02-93    8:21p
OLDMAID  GAM         11 05-02-93    8:23p
        3 file(s)          29 bytes
                     XXXXXX bytes free
```

- **Type** `COPY *.GAM *.BAK` ↵
  DOS reports a successful copy.

```
CLUE.GAM
TRIVIA.GAM
OLDMAID.GAM
        3 file(s) copied
```

- **Type** `DIR *.BAK` ↵

```
JONES    BAK          9 05-02-93    7:48p
CLUE     BAK          8 05-02-93    8:17p
TRIVIA   BAK         10 05-02-93    8:21p
OLDMAID  BAK         11 05-02-93    8:23p
        4 file(s)          38 bytes
                     XXXXXX bytes free
```

- **Type** `DIR` ↵
  The filenames flash past, but you can see that new .BAK files are the last three listed.

3 **Print a list of the root directory:**

- **Type** `DIR>PRN` ↵
- **Force** the printer to eject the paper.
  NOTE: The result is shown in Appendix E.

4

- **Go on** to Exercise 21
  or **take** the disk out of drive A: and turn the computer off.

EXERCISE 20
COPY a group of files to the same directory

COPY is the DOS command that duplicates file(s). When you copy *multiple* files to the same directory as the original files, you *must* give the duplicate files new filenames.

OBJECTIVES:

- use DIR to check files before and after copying
- identify *filename patterns*
- copy more than one file from the *current* directory to the *current* directory, renaming the duplicate files

– Terms and Notes –

filename pattern
A combination of *characters* and *wildcards* that represents a group of files.

wildcards
Symbols that stand for *any* single character (?) or *any* group of consecutive characters (*) in a DOS command.

STEPS to

Copy a group of files from the current directory to the current directory

1 Type `COPY`
2 Press Space
3 Type the filename pattern of files to copy.
4 Press Space
5 Type the new filename pattern that identifies the duplicate files.
6 Press ↵

EXERCISE 21
COPY files to different directories

COPY is the DOS command that duplicates file(s). When you copy files to *different directories*, you can either *keep the original filenames* or *rename* the duplicate files.

OBJECTIVES:

- use DIR to check files before and after copying
- identify the path to the directory you want to copy to
- copy *one file* from the current directory to a different directory
- copy *a group of files* from the current directory to a different directory
- copy a *group of files* from the current directory to a different directory and *rename* the duplicate files
- copy *all of the files* from the current directory to a different directory

– Terms and Notes –

WARNING: If you copy files to a directory that does not exist, DOS will assume that you want to copy the file or group of files to a single file with the filename of that nonexistent directory.
For example, if you mean to copy files ending with .VEG to the VEGGIES directory but you accidentally issue this command:

```
COPY *.VEG \FOOD\VEGE
```

DOS will copy the contents of all the files ending with .VEG to a single file named VEGE in the FOOD directory.

NOTE: Copying multiple files to a single file is called "concatenation," and it is a useful feature that is intentionally included in DOS, but not covered in this book.

Copying files to different directories

When you copy files to a *different* directory you must tell DOS where to send the files by typing the path in the COPY command. For example:

```
COPY   COOKIES.DES   \FOOD\GOODIES
 ↑          ↑              ↑
command   filename       path
```

When you copy files to a *different* directory, you can either change the duplicate filenames or keep their original names. For example:

- *To keep the original filename, type:* `COPY COOKIES.DES \FOOD\GOODIES`
- *To change the filename, type:* `COPY COOKIES.DES \FOOD\GOODIES\COOKY.YUM`

1 • If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 **Copy one file from the current directory to a different directory:**
(copy JONES.BAK to the BAK directory)
With this prompt showing: A:\>

- **Type** `DIR JONES.BAK` ↵

```
JONES    BAK          9 05-02-93   7:48p
```

- **Type** `COPY JONES.BAK \BAK` ↵

```
1 file(s) copied
```

- **Type** `DIR \BAK` ↵
  You can see that DOS copied JONES.BAK to the BAK directory.

```
 Directory of A:\BAK

.            <DIR>      06-22-93  10:43p
..           <DIR>      06-22-93  10:43p
JONES    BAK          9 05-02-93   7:48p
        3 file(s)              9 bytes
                       XXXXXX bytes free
```

3 **Copy a group of files from the current directory to a different directory:**
(copy all the files ending with .VEG to the VEGGIES directory)
With this prompt showing: A:\>

- **Type** `DIR *.VEG` ↵

```
CORN     VEG          8 05-02-93   8:17p
RADISH   VEG         10 05-02-93   8:17p
POTATOES VEG         12 05-02-93   8:18p
        3 file(s)              30 bytes
                       XXXXXX bytes free
```

- **Type** `COPY *.VEG \FOOD\VEGGIES` ↵

```
CORN.VEG
RADISH.VEG
POTATOES.VEG
        3 file(s) copied
```

- **Type** `DIR \FOOD\VEGGIES` ↵
  The .VEG files just copied are displayed at the bottom of the list.

```
CORN     VEG          8 05-02-93   8:17p
RADISH   VEG         10 05-02-93   8:17p
POTATOES VEG         12 05-02-93   8:18p
       10 file(s)              81 bytes
                       XXXXXX bytes free
```

Exercise 21 continued...

4 Copy a group of files from the current directory to a different directory and rename them:

(copy LETTER? to the \BAK directory and rename them with a .BAK extension)

- **Type** DIR LETTER? ↵

  *NOTE: Remember that "?" is a **wildcard** that represents a single character.*

```
LETTER1              7 05-02-93   8:15p
LETTER2              7 05-02-93   8:16p
LETTER3              7 05-02-93   8:22p
        3 file(s)          21 bytes
                       XXXXXX bytes free
```

- **Type** COPY LETTER? \BAK\LETTER?.BAK ↵

  *NOTE: When you rename duplicate files that are being copied to a different directory, you type the new **filename pattern** after you type the **path**.*

```
LETTER1
LETTER2
LETTER3
        3 file(s) copied
```

- **Type** DIR \BAK ↵

```
 Directory of A:\BAK

.            <DIR>      06-22-93  10:43p
..           <DIR>      06-22-93  10:43p
JONES    BAK           9 05-02-93   7:48p
LETTER1  BAK           7 05-02-93   8:15p
LETTER2  BAK           7 05-02-93   8:16p
LETTER3  BAK           7 05-02-93   8:22p
        6 file(s)          30 bytes
                       XXXXXX bytes free
```

5 Copy all of the files from the current directory to a different directory:

- **Change** to the GAMES directory (review, Exercise 14).

```
A:\GAMES>
```

- **Type** COPY *.* \BAK ↵

  *NOTE: The *.* filename pattern represents all the files in a directory.*

```
ASTRO.GAM
CHESS.GAM
JEOPARDY.GAM
        3 file(s) copied
```

- **Type** DIR \BAK ↵

```
 Directory of A:\BAK

.            <DIR>      05-22-93   8:43p
..           <DIR>      05-22-93   8:43p
JONES    BAK           9 05-02-93   7:48p
LETTER1  BAK           7 05-02-93   8:15p
LETTER2  BAK           7 05-02-93   8:16p
LETTER3  BAK           7 05-02-93   8:22p
ASTRO    GAM           9 05-02-93   8:48p
CHESS    GAM           9 05-02-93   8:48p
JEOPARDY GAM          12 05-02-93   8:49p
        9 file(s)          60 bytes
                       XXXXXX bytes free
```

- **Change** back to the *root* directory (review, Exercise 14).

```
A:\>
```

6 Print a list of the files in the BAK directory:

- **Type** DIR \BAK >PRN ↵
- **Force** the printer to eject the paper.

  NOTE: The result should match the result above.

7

- **Go on** to Exercise 22

  or **take** the disk out of drive A: and turn the computer off.

Exercise 21 (continued)

COPY files to different directories

copying to a different drive:

Copying files to a different drive is very common.

This book does not ask you to copy to a different disk drive because we do not want to ask you to copy files on drive C: and we do not know if you have a drive B:.

To copy files to a different drive, simply add the drive to the beginning of the destination path as shown in these examples:

```
COPY TEST.DOC B:\
COPY TEST.DOC C:\WP\DOC
```

NOTE: While the DISKCOPY command copies an *entire* disk and requires that the source and target disks be *identical* in size and density, when you use the COPY command you can copy files between different disks regardless of the disks' density and size (you do need to have enough bytes free on the receiving disk to store the particular file(s) you are copying).

STEPS to

Copy file(s) from the current directory to a different directory

1 Type COPY
2 Press Space
3 Type the filename or filename pattern of file(s) to copy.
4 Press Space
5 Type the path to the new directory.
6 Press ↵

Copy file(s) from the current directory to different directory and rename the duplicate file(s)

1 Type COPY
2 Press Space
3 Type the filename or filename pattern of file(s) to copy.
4 Press Space
5 Type the path to the new directory.
6 Type \
7 Type the new filename or filename pattern.
8 Press ↵

Copy all the files from the current directory to a different directory

1 Type COPY *.*
2 Press Space
3 Type the path to the new directory.
4 Press ↵

EXERCISE 22
DEL (delete)

Removes files from a disk.

OBJECTIVES:

- delete a *file* in the current directory
- delete a *group of files* in the current directory
- change directory (CD) before deleting files
- use a path to delete files in a different directory
- delete *all* the files in a directory

– Terms and Notes –

NOTE: The ERASE command performs the same actions as the DEL command and can be substituted for the DEL command.

STEPS to

Delete file(s) from the current directory

1 Type DEL
2 Press Space
3 Type filename or filename pattern of file(s) to delete.
4 Press ↵

Delete file(s) from a different directory

1 Type DEL
2 Press Space
3 Type the path to the directory.
4 Type \
5 Type filename or filename pattern of file(s) to delete.
6 Press ↵

Delete all files from the *current* directory

1 Type DEL *.* ↵
DOS asks: Are you sure (Y/N)?
2 Type Y ↵

Deleting a file—is it final?

Deleting a file removes its *filename* from DOS's *list of filenames*. But the information in the file remains on the disk *until DOS stores some other information in that location*. With MS-DOS 5 or 6, you can use the UNDELETE command (Exercise 23) to restore the file as long as no other file has physically replaced the original information.

1

- If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 Delete a file from the current directory:

- **Type** `DIR JONES.BAK` ↵
  There is a copy of JONES.BAK in the current directory.

```
JONES      BAK          9 05-02-93   7:48p
        1 file(s)              9 bytes
                       XXXXXX bytes free
```

- **Type** `DEL JONES.BAK` ↵
  DOS simply displays a new DOS prompt. But the drive A: light goes on, which indicates that there has been some action. You will list the file again to see if it is there.
- **Type** `DIR JONES.BAK` ↵

```
File not found
```

3 Delete one file from a different directory:
(delete RADISH.VEG from the VEGGIES directory)

- **Type** `DIR \FOOD\VEGGIES\RADISH.VEG` ↵

```
RADISH     VEG         10 05-02-93   8:17p
        1 file(s)              10 bytes
                       XXXXXX bytes free
```

- **Type** `DEL \FOOD\VEGGIES\RADISH.VEG` ↵
- **Type** `DIR \FOOD\VEGGIES\RADISH.VEG` ↵

```
File not found
```

4 Delete a group of files from the current directory
With this prompt showing: A:\>

- **Type** `DIR *.RPT` ↵

```
LOPEZ      RPT          9 05-02-93   8:19p
SMITH      RPT          9 05-02-93   8:20p
JONES      RPT          9 05-02-93   8:23p
        3 file(s)              27 bytes
                       XXXXXX bytes free
```

- **Type** `DEL *.RPT` ↵
- **Type** `DIR *.RPT` ↵

```
File not found
```

5 Change to a different directory (cd) and delete a group of files from the new current directory:

- **Type** `CD \FOOD\VEGGIES`
- **Type** `DIR C*.*` ↵

```
CABBAGE    VEG         11 05-02-93   8:47p
CARROTS    VEG         11 05-02-93   8:47p
CELERY     VEG         10 05-02-93   8:48p
CORN       VEG          8 05-02-93   8:17p
        4 file(s)              40 bytes
                       XXXXXX bytes free
```

Exercise 21 continued...

- **Type** DEL C*.* ↵
- **Type** DIR C*.* ↵

```
File not found
```

- **Type** CD\ ↵ (to return to the ROOT directory)

6 Delete a group of files from a different directory:

With this prompt showing: A:\>

- **Type** DIR \BAK*.BAK ↵

```
JONES    BAK          9 05-02-93   7:48p
LETTER1  BAK          7 05-02-93   8:15p
LETTER2  BAK          7 05-02-93   8:16p
LETTER3  BAK          7 05-02-93   8:22p
        4 file(s)          30 bytes
                     XXXXXX bytes free
```

You want to delete only the LETTER files. What *file pattern* can you use to accomplish that?

- **Type** DEL \BAK\LETTER?.BAK ↵
  NOTE: These filename patterns would work also: L.*, L*.BAK or LETTER*.BAK.*
- **Type** DIR \BAK*.BAK ↵

```
JONES    BAK          9 05-02-93   7:48p
        1 file(s)          9 bytes
                     XXXXXX bytes free
```

7 Delete all the files in a directory:

- **Change** to the BAK directory (review, Exercise 14).

```
A:\BAK>
```

- **Type** DIR ↵

```
 Directory of A:\BAK

.            <DIR>      05-22-93   8:43p
..           <DIR>      05-22-93   8:43p
JONES    BAK          9 05-02-93   7:48p
ASTRO    GAM          9 05-02-93   8:48p
CHESS    GAM          9 05-02-93   8:48p
JEOPARDY GAM         12 05-02-93   8:49p
        6 file(s)          39 bytes
                     XXXXXX bytes free
```

- **Type** DEL *.* ↵
  *NOTE: The *.* filename pattern represents all the files in a directory.*
  This is a dangerous action so DOS warns you of what you are about to do.

```
All files in directory will be deleted!
Are you sure (Y/N)?
```

- **Type** Y ↵
- **Type** DIR ↵
  There are no files in the directory—just the two directories that DOS uses to keep track of the directory structure, and which, by the way, DOS counts as ***files****.*

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of A:\BAK

.            <DIR>      05-02-93   7:46p
..           <DIR>      05-02-93   7:46p
        2 file(s)          0 bytes
                     XXXXXX bytes free
```

- **Change** to the *root* directory (review, Exercise 14).

8

- **Go on** to Exercise 23
  or **take** the disk out of drive A: and turn the computer off.

NOTE: When you decide to work in a directory, it may be less confusing to make that directory *current*. This is especially true when you are deleting all the files in a directory – typing the wrong directory name could be disastrous.

EXERCISE 23
UNDELETE

Restores files that have been deleted.
To increase the chance that UNDELETE will work, you should undelete a file *immediately*, or at least before *saving* new information on the disk.

OBJECTIVES:
- restore *one deleted file*
- restore a *group of deleted files*

– Terms and Notes –

NOTE: The results shown in step 2 are from DOS 5. DOS 6 has some slight differences in its report.

NOTE: To UNDELETE files in other directories, either:
- Change directories (CD) before issuing the command, or
- Type the **path** to the desired file before typing the filename or filename pattern.

NOTE: UNDELETE is a complex DOS feature with special programs that let you determine the level of deletion protection. This textbook covers only the basic, "automatic" protection level.

STEPS to

Restore deleted files
1 Type UNDELETE
2 Press Space
3 Type filename to restore.
4 Press ↵
DOS lists the file and prompts you to: `Undelete (Y/N)?`
5 Type Y
DOS prompts you to: `Please type the first character for (filename):`
6 Type the first letter of the filename.
7 Press ↵

1
- If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 **Restore one file:**
- **Type** `UNDELETE JONES.BAK` ↵

your filename or filename pattern — *indicates that this "level" of deletion protection is not in use*

```
Directory: A:\
File Specifications: JONES.BAK

    Deletion-tracking file not found.

    MS-DOS directory contains    1 deleted files.
    Of those,    1 files may be recovered.
Using the MS-DOS directory.

      ?ONES    BAK         9  5-02-93   7:48p  ...A  Undelete (Y/N)?
```

specifies the number of files that match your request and can be restored

prompt to undelete

*IMPORTANT: UNDELETE is an **external command**. If you get a **Bad command or file name** message, C:\DOS is not in the PATH command of your AUTOEXEC.BAT file. However, you can probably complete this exercise if you type PATH C:\DOS ↵ and repeat step 2 (see Exercise 66, page 168).*

- **Type** `Y`

```
      Please type the first character for ?ONES.BAK:
```

- **Type** `J`

```
File successfully undeleted.
```

- **Type** `DIR JONES.BAK` ↵

```
JONES    BAK         9 05-02-93   7:48p
```

3 **Restore a group of files:**
- **Type** `UNDELETE *.RPT` ↵
In the partial DOS display below, you will see that DOS reports that there are "3 deleted files" and that "Of those, 3 files may be recovered."

```
    MS-DOS directory contains    3 deleted files.
    Of those,    3 files may be recovered.
Using the MS-DOS directory.
      ?OPEZ    RPT         9  5-02-93   8:19p  ...A  Undelete (Y/N)?
```

- **Type** `Y`

```
      Please type the first character for ?OPEZ    .RPT:
```

- **Type** `L` (first letter of filename)
DOS reports success and then prompts you to undelete the next file.

```
File successfully undeleted.
      ?MITH    RPT         9  5-02-93   8:20p  ...A  Undelete (Y/N)?
```

- **Type** `Y`

```
      Please type the first character for ?MITH    .RPT:
```

- **Type** `S`

```
File successfully undeleted.
      ?ONES    RPT         9  5-02-93   8:23p  ...A  Undelete (Y/N)?
```

- **Type** `Y`

```
      Please type the first character for ?ONES    .RPT:
```

- **Type** `J`

```
File successfully undeleted.
```

- **Type** `DIR *.RPT` ↵
DOS lists the three undeleted files.

4
- **Go on** to Exercise 24
or **take** the disk out of drive A: and turn the computer off.

Renaming files

To *rename* a file, first type the REN command, then the file's original filename, and finally, the file's new filename.

```
REN  JELLO.DES  GEL.DES
 ↑      ↑         ↑
command  original filename  new filename
```

Unlike copying a file, when you rename a file the original filename is removed. The *contents* of the original file are still intact—they simply have a *new* filename.

1

- If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 **Rename a file in the current directory:**
(rename JELLO.DES to GEL.DES)

- **Type** `DIR *.DES` ↵

```
PUDDING  DES          11 05-02-93   8:19p
JELLO    DES           9 05-02-93   8:23p
       2 file(s)            20 bytes
                      XXXXXX bytes free
```

- **Type** `REN JELLO.DES GEL.DES` ↵
  Drive A:'s light goes on, and DOS shows a new prompt on the screen.
- **Type** `DIR *.DES` ↵
  You can see that JELLO.DES has been renamed GEL.DES.

```
PUDDING  DES          11 05-02-93   8:19p
GEL      DES           9 05-02-93   8:23p
       2 file(s)            20 bytes
                      XXXXXX bytes free
```

3 **Try to rename a file to a filename in the current directory:**
(rename GEL.DES to PUDDING.DES)

- **Type** `REN GEL.DES PUDDING.DES` ↵
  DOS will not let you rename a file to a filename already in use in the current directory.

```
Duplicate file name or file not found
```

4 **Rename a group of files in the current directory:**
(rename files with .DES extensions to files with .YUM extensions)

*NOTE: Since you listed the .DES files in the last step, you know what they are and do not need to check them with DIR again before you **rename** them.*

- **Type** `REN *.DES *.YUM` ↵
- **Type** `DIR *.DES` ↵
  Since you renamed all the .DES files, the original files are not there for DOS to find.

```
File not found
```

- **Type** `DIR *.YUM` ↵

```
PUDDING  YUM          11 05-02-93   8:19p
GEL      YUM           9 05-02-93   8:23p
       2 file(s)            20 bytes
                      XXXXXX bytes free
```

5

- **Go on** to Exercise 25
  or **take** the disk out of drive A: and turn the computer off.

EXERCISE 24
REN (rename)

Changes a file's name.

OBJECTIVES:

- rename *one file* in the current directory
- rename a *group of files* in the current directory

– Terms and Notes –

NOTE: You can rename files in different drives by typing the **drive** after REN and before the original filename.
For example:

```
REN C: AUTO.BAT AUTO.OLD
```

You can also rename files in different directories by typing the **path** after REN and before the original filename.
For example:

```
REN \TEMP\AUTO.BAT AUTO.OLD
```

But you cannot rename files to different drives or directories.

STEPS to

Rename files

1 Type REN
2 Press Space
3 Type (original filename).
4 Press Space
5 Type (new filename).
6 Press ↵

EXERCISE 25
MOVE

FOR DOS 6 ONLY

***Moves files* from one directory to another directory or *renames directories*.**

OBJECTIVES:

- move *one file* to a different directory
- move a *group of files* to a different directory
- rename a directory

– Terms and Notes –

WARNING: You can lose data when moving files. If the new location you are moving a file to has a file with the same name as the file you are moving, DOS will **overwrite the existing file with the file being moved** without warning you (except for DOS 6.2 – see note below).

DOS 6.2 NOTE: Unlike earlier versions of DOS, DOS 6.2 warns you and asks for your confirmation before overwriting a file with the same filename as the one you are copying.

STEPS to

Move files

1 Type MOVE
2 Press Space
3 Type filename or filename pattern of file(s) to move.
4 Press Space
5 Type path to new location.
6 Press ↵

Rename a directory

1 Type MOVE
2 Press Space
3 Type directory to rename.
4 Press Space
5 Type new directory name.
6 Press ↵

DOS 5 users skip Exercise 25

Moving Files

The MOVE command is new to DOS 6. MOVE has two jobs: 1) relocate files, and 2) change directory names.

To move a file, first type MOVE, then the name of the file to move, and finally, the new location.

```
MOVE   LOPEZ.MEM   \PROGRAMS\DATA
  ↑        ↑              ↑
command  filename     new location
```

To rename a directory, first type MOVE, then type the directory to rename, and finally, type the new directory name.

```
MOVE   \PROGRAMS   \PROGS
  ↑        ↑          ↑
command  directory  new directory name
```

NOTE: Earlier versions of DOS cannot rename directories, and they "move" files by using COPY (to place files in other directories) and then DEL (to delete the original files).

1

- If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 **Move one file:**

(move LOPEZ.MEM to the DATA directory)

- **Type** `DIR *.MEM` ↵
  (to confirm that the original file is there)

```
SMITH    MEM          9 05-02-93   8:20p
LOPEZ    MEM          9 05-02-93   8:21p
JONES    MEM          9 05-02-93   8:22p
       3 file(s)         27 bytes
                      XXXXXX bytes free
```

- **Type** `MOVE LOPEZ.MEM \PROGRAMS\DATA` ↵

  *IMPORTANT: MOVE is an **external command**. If you get a **Bad command or file name** message, DOS is not in the PATH command of your AUTOEXEC.BAT file. However, you can probably complete this exercise if you type PATH C:\DOS ↵ and repeat step 2 (see Exercise 66, page 168).*

```
a:\lopez.mem => \programs\data\lopez.mem [ok]
```

- **Type** `DIR \PROGRAMS\DATA\*.MEM` ↵
  (to check DATA directory for the new file)

```
LOPEZ    MEM          9 05-02-93   8:21p
       1 file(s)          9 bytes
                      XXXXXX bytes free
```

- **Type** `DIR *.MEM` ↵
  (to check the original file—LOPEZ.MEM is no longer in the directory)

```
SMITH    MEM          9 05-02-93   8:20p
JONES    MEM          9 05-02-93   8:22p
       2 file(s)         18 bytes
                      XXXXXX bytes free
```

3 **Move a group of files:**

(move all the MEMO files to the DATA directory)

- **Type** `DIR MEMO?` ↵
  (to confirm that the original files are there)

```
MEMO3                5 05-02-93   8:21p
MEMO1                5 05-02-93   8:24p
MEMO2                5 05-02-93   8:24p
       3 file(s)         15 bytes
                      XXXXXX bytes free
```

Exercise 25 continued...

- **Type** MOVE MEMO? \PROGRAMS\DATA ↵

```
a:\memo3 => a:\programs\data\memo3 [ok]
a:\memo1 => a:\programs\data\memo1 [ok]
a:\memo2 => a:\programs\data\memo2 [ok]
```

- **Type** DIR \PROGRAMS\DATA\MEMO? ↵
(to check the DATA directory for the new files)

```
MEMO3                5 05-02-93   8:21p
MEMO1                5 05-02-93   8:24p
MEMO2                5 05-02-93   8:24p
        3 file(s)          15 bytes
                       XXXXXX bytes free
```

- **Type** DIR MEMO? ↵
(to check the original files—they are gone)

```
File not found
```

4 Rename a directory:

(rename PROGRAMS to PROGS to shorten the name)

NOTE: Renaming a directory does not change the files and other directories within the original directory.

- **Type** TREE ↵

```
Directory PATH listing for Volume LEARNING
Volume Serial Number is XXXX-XXXX
 A:.
   ├──GAMES
   ├──FOOD
   │     ├──VEGGIES
   │     └──GOODIES
   ├──PROGRAMS     ← original directory name
   │     └──DATA
   └──BAK
```

- **Type** MOVE \PROGRAMS \PROGS ↵

```
a:\programs => a:\progs [ok]
```

- **Type** TREE ↵

```
Directory PATH listing for Volume LEARNING
Volume Serial Number is XXXX-XXXX
 A:.
   ├──GAMES
   ├──FOOD
   │     ├──VEGGIES
   │     └──GOODIES
   ├──PROGS        ← new directory name
   │     └──DATA
   └──BAK
```

5 List files within the renamed directory branch:

(list MEMO files in the DATA directory)

- **Type** DIR \PROGS\DATA\MEMO? ↵
DOS lists the same files that were in the PROGRAMS directory.

```
MEMO3                5 05-02-93   8:21p
MEMO1                5 05-02-93   8:24p
MEMO2                5 05-02-93   8:24p
        3 file(s)          15 bytes
                       XXXXXX bytes free
```

6 Print a list of the root directory:

- **Type** DIR>PRN ↵
- **Force** the printer to eject the paper.
NOTE: The result is shown in Appendix E.

7

- **Go on** to Exercise 26
or **take** the disk out of drive A: and turn the computer off.

EXERCISE 26
TYPE

Displays the contents of a file.

OBJECTIVES:

- view the contents of an ASCII file
- view the contents of a program file
- view the contents of a batch file on drive C:
- print the contents of some ASCII files

– Terms and Notes –

ASCII file
A file saved in ASCII format contains only text and is free of formatting codes. Also called a *text* file.

program file
A file that contains executable codes. These codes will appear as strange-looking symbols when viewed using the TYPE command.

batch file
A file that contains a list of DOS commands that DOS carries out as a set. Batch files always have a .BAT filename extension.

STEPS to

View the contents of a file

1 Type `TYPE`
2 Press Space
3 Type the filename of the file to view (including the path, if the file is in a different directory).
4 Press ↵

Print the contents of a file

1 Type `TYPE`
2 Press Space
3 Type the filename of the file to view (preceded by the path, if the file is in a different directory).
4 Type `>PRN`
5 Press ↵
6 Force the printer to eject the paper.

1

- If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 **View the contents of an ASCII file:**

- **Type** `TYPE HELLO` ↵

```
HELLO, HELLO, HELLO, hello, hello, hello.
How are you this fine day?
It is a fine day isn't it?
```

- **Type** `TYPE NOT` ↵

```
Having a wonderful time learning about DOS's TYPE command?
```

3 **View the contents of a program file:**

NOTE: Since all the .EXE files are in a different directory, we will use a ***path*** *with the TYPE command. Notice how the* ***path*** *to a file almost seems to become part of the filename as it leads DOS directly to the file.*

- DOS 6 users: **Type** `TYPE PROGS\WP.EXE` ↵
  DOS 5 users: **Type** `TYPE PROGRAMS\WP.EXE` ↵
  A lot of beeping is heard and strange symbols appear on the screen. As you can tell, using the TYPE command with program files is not useful to you.

4 **View a file in a different directory:**

- **Type** `TYPE FOOD\GOODIES\PIE.DES` ↵

```
PIE.DES
```

NOTE: Most of the files on the Learning Disk are "dummy" files, meaning that they do not have anything of importance in them but are for your practice in manipulating files. The files were created in ASCII (text) format, and most files contain just their own name (as the above result shows).

5

- **Use** the TYPE command to view the contents of other files on the disk as you desire.

6 **View the contents of a batch file on drive c:**

- **Type** `TYPE C:\AUTOEXEC.BAT` ↵
  DOS displays the contents of a very important ***batch*** *file. (AUTOEXEC.BAT contains commands that execute each time you start your computer.)*

7 **Redirect the results of the TYPE command to the printer:**

- **Make** sure the printer is ready to receive data.
- **Type** `TYPE HELLO >PRN` ↵
- **Type** `TYPE NOT >PRN` ↵
- **Type** `TYPE FOOD\GOODIES\CAKE.DES >PRN` ↵
- **Force** the printer to eject the paper.

```
HELLO, HELLO, HELLO, hello, hello, hello.
How are you this fine day?
It is a fine day isn't it?
Having a wonderful time learning about DOS's TYPE command?
CAKE.DES
```

8

- **Go on** to Exercise 27
  or **take** the disk out of drive A: and turn the computer off.

Formatting a disk

When you format a disk, DOS sets up a *File Allocation Table* (FAT) and creates a *root* directory. DOS uses the FAT to track the location of files on your disk and the *root* directory to store the filename, extension, size, and creation date and time of all files on your disk.

Unless you tell it otherwise, *most* floppy disk drives will try to format your disk to the maximum capacity of the drive. This can cause problems on disks that do not have the required *density*. However, you can format a disk to the following standard sizes by using the /F switch with the appropriate disk size: 360K or 720K.

To format a *double density (DD)* disk in a *high density (HD)* disk drive, type FORMAT, then type the *drive* that holds the disk, and finally, type the /F switch and the desired *format size*. For example, this command tells DOS the size of the disk (360K) it is to format:

```
FORMAT A: /F:360
  ↑       ↑  ↑   ↑
command drive switch size
```

To format a *high density* disk in a *high density* disk drive A:, type:

```
FORMAT  A:
  ↑     ↑
command drive
```

1 • If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 **Format your DUPLICATE Learning Disk:**

NOTE: Yes, you are going to erase everything on the DUPLICATE Learning Disk.

- 5¼" DD disk: **Type** `FORMAT A:` ↵

  OR

  3½" DD disk: **Type** `FORMAT A:` ↵

  DOS prompts you to put the disk you want to format into drive A:

```
Insert new diskette for drive A:
 and press ENTER when ready...
```

  IMPORTANT: *FORMAT is an **external command**. If you get a **Bad command or file name** message, DOS is not in the PATH command of your AUTOEXEC.BAT file. However, you can probably complete this exercise if you type PATH C:\DOS ↵ and repeat step 2 (see Exercise 66, page 168).*

- **Put** the *duplicate Learning Disk* in drive A:, and **make sure** that it is not *write-protected.*

- **Press** ↵

  DOS displays the first two lines on the illustration below and then shows a "running" report as the formatting progresses. After a while DOS reports "Format complete" and prompts you for a Volume label.

```
 Checking existing disk format.
 Saving UNFORMAT information.
 Verifying 360K  (or 720K)
 Format complete.

Volume label (11 characters, ENTER for none)?
```

Exercise 27 continued...

EXERCISE 27 FORMAT

The DOS command that prepares a disk for use by the computer.

OBJECTIVES:

- distinguish between formatting a *double density* disk and a *high density* disk in a *high density* disk drive
- format a *double density* disk in a *high density* disk drive
- format the DUPLICATE Learning Disk

– Terms and Notes –

WARNING: When you use FORMAT, any existing data on the disk will be destroyed.

NOTE: DOS versions 5 and 6 have an UNFORMAT command that may be able to restore a newly formatted disk.

WARNING: DO NOT PROCEED WITH FORMAT if you get this message:

WARNING, ALL DATA ON
NON-REMOVABLE DISK
DRIVE C: WILL BE LOST!
Proceed with Format (Y/N)?

Type N and press ↵

FORMAT switches

/F:size	**format** size (160, 180, 320, 360, 720, 1.2, 1.44, 2.88)
/S	creates a **system** (bootable) disk
/Q	formats **quickly**, but does not scan for bad areas on disk
/U	formats **unconditionally**, destroying data so that it cannot be unformatted, and scans disk for bad areas
/V	used to enter a **volume** label of up to 11 characters

NOTE: If the FORMAT command does not work, you may have a DOS utility program that has altered the FORMAT command name, for example, it may be FORMAT!.

STEPS to

Steps to are on the next page.

- **Type** LEARNING ↵

NOTE: You can press ↵ if you do not want to give the disk a volume label.

*DOS reports the **total disk capacity** (bytes of total disk space) and the **bytes available**. Finally, DOS prompts you to "Format another (Y/N)?"*

```
    362496 bytes total disk space
    362496 bytes available on disk

      1024 bytes in each allocation unit.
       354 allocation units available on disk.

Volume Serial Number is XXXX-XXXX

 Format another (Y/N)?
```

***WARNING**: If DOS reports some **bytes in bad sectors**, you should not use the disk because this disk will be used with the DISKCOPY command. DISKCOPY copies the **source** disk **exactly**, that is, DOS puts information in exactly the same location on the **destination** disk as it is on the **source** disk. If the **destination** disk has **bad sectors**, the information that should go in those sectors is lost, and the DISKCOPY process usually fails. So, while disks with **bad sectors** can be used for some things, they should not be used with the DISKCOPY command nor to store important files.*

- **Type** N ↵

```
A:\>
```

3 • **Go on** to Exercise 28
or **take** the disk out of drive A: and turn the computer off.

STEPS to

Format disks in an HD disk drive

1 Type FORMAT
2 Press Space
3 Type the disk drive letter.
4 Press :
  IF the disk is *double density (DD)*:
  - Type /F:
  - Type the disk *size*.
5 Press ↵
6 Place your nonwrite-protected disk in the disk drive named above (step 3).
7 Press ↵
  After a little time DOS reports "format complete," and prompts you for a Volume label.
8 Type a volume label
  OR
  Press ↵ (for no label).
  DOS prompts: "Format another (Y/N)?"
9 Type Y ↵ and repeat steps 6–8 (or steps 4–8 if the disk is DD).
  OR
  Type N ↵

EXERCISE 28
Practice

LESSON THREE
Frequently Used DOS Commands

OBJECTIVE:

- review the following tasks from the exercises in Lesson Three:

  DISKCOPY
  COPY a file to the current directory
  COPY a group of files to the current directory
  COPY a file to a different directory
  COPY a group of files to a different directory
  COPY a group of files to a different directory and rename them
  COPY all the files in a directory to a different directory

The COMMANDS to perform each step are listed in Appendix F.
Try to complete the exercise without looking at the Appendix for help.

NOTE: When doing the exercise steps that follow, use the DIR command to list files before and after copying to get a sense of the movement of your files.

1. **Use** DISKCOPY to copy the contents of the Learning Disk to the "Duplicate" Learning Disk. Use the *verify switch* and make sure that the original Learning Disk is *write-protected*.

2. **Access** the newly copied DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

3. **Copy** the file LETTER1 to the *current* directory and rename it LETTER4.

4. **Copy** the group of files with the extension .MEM to the *current* directory and rename them to files with the extension .BAK.

5. **Copy** LETTER4 to the DATA directory (a subdirectory of PROGRAMS).

6. **Copy** the group of files with the extension .VEG to the VEGGIES directory.

7. **Copy** the group of files with the extension .BAK to the BAK directory.

8. **Copy** the group of files that end with .VEG to the BAK directory and rename them to files with the extension .BAK.

9. **Change** to the GAMES directory.

10. **Copy** *all* of the files in the GAMES directory to the BAK directory.

11. **Change** to the *root* directory.

12. **Copy** the group of files in the current directory that begin with P to the BAK directory.

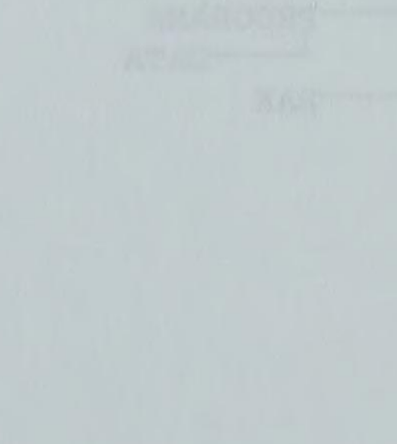
13. **Print** a list of the files in the BAK directory.
    Force the printer to eject the paper.

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of A:\BAK

.            <DIR>      05-22-93   8:43p
..           <DIR>      05-22-93   8:43p
SMITH    BAK             9 05-02-93   8:20p
LOPEZ    BAK             9 05-02-93   8:19p
JONES    BAK             9 05-02-93   8:23p
CORN     BAK             8 05-02-93   8:17p
RADISH   BAK            10 05-02-93   8:17p
POTATOES BAK            12 05-02-93   8:18p
ASTRO    GAM             9 05-02-93   8:48p
CHESS    GAM             9 05-02-93   8:48p
JEOPARDY GAM            12 05-02-93   8:49p
POTATOES VEG            12 05-02-93   8:18p
PUDDING  DES            11 05-02-93   8:19p
       13 file(s)          110 bytes
                        XXXXXX bytes free
```

14. **Go on** to Exercise 29
    or **take** the disk out of drive A: and turn the computer off.

Use the directory structure below to help you do the exercise.



EXERCISE 29
Practice

LESSON THREE
Frequently Used DOS Commands

OBJECTIVE:

- review the following tasks from the exercises in Lesson Three:

DELete a file in the current directory
DELete a file in a different directory
DELete a group of files from the current directory
DELete a group of files from a different directory
DELete all the files in a directory

UNDELete a file
UNDELete a group of files

REName a file
REName a group of files

MOVE a file DOS 6 ONLY
MOVE a group of files DOS 6 ONLY
REName a directory DOS 6 ONLY

TYPE
view the contents of an ASCII file
view the contents of a program file
view the contents of a batch file
use TYPE and the redirect code to print some ASCII files

FORMAT the Duplicate disk
DISKCOPY the original Learning Disk to the Duplicate Learning Disk

Use the directory structure below to help you do the exercise.

```
A:.
    GAMES
    FOOD
        VEGGIES
        GOODIES
    PROGRAMS
        DATA
    BAK
```

The COMMANDS to perform each step are listed in Appendix F. Try to complete the exercise without looking at the Appendix for help.

NOTE: When doing the exercise steps that follow, use the DIR command to list files before and after copying to get a sense of the movement of your files.

1. If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2. **Delete** OLDMAID.GAM from the current (root) directory.

3. **Delete** the group of files ending with .BAK from the current directory.

4. **Delete** JEOPARDY.GAM from the GAMES directory.

5. **Delete** the group of files ending with .GAM from the BAK directory.

6. **Change** to the GOODIES directory.

7. **Delete** *all* the files from the GOODIES directory.

8. **Change** back to the *root* directory.

9. **Rename** LOPEZ.RPT to LOPEZRPT.BAK (in the *root* directory).

10. **Rename** the group of files ending with .GAM to files ending with .FUN (in the *root* directory).

11. DOS 6 ONLY. **Move** LOPEZRPT.BAK from the *root* directory to the BAK directory.
    DOS 5 ONLY. **Copy** LOPEZRPT.BAK to the BAK directory and then **delete** LOPEZRPT.BAK from the current (root) directory.

12. DOS 6 ONLY. **Move** the group of files ending with .FUN from the *root* directory to the GAMES directory.
    DOS 5 ONLY. **Copy** the group of files ending with .FUN to the GAMES directory and then **delete** the group of files ending with .FUN from the current (root) directory.

13. DOS 6 ONLY. **Use** MOVE to **rename** the GAMES directory to FUN.

14. DOS 6 ONLY. **Use** TREE to view the directory structure.

```
A:.
    FUN          ← changed directory
    FOOD
        VEGGIES
        GOODIES
    PROGRAMS
        DATA
    BAK
```

15. **View** the contents of the ASCII file HURRAH.

```
HURRAH!  This is the last TYPE command in this lesson.
```

16. **View** the contents of the program file DB.EXE (located in the PROGRAMS directory). It beeps for a *long* time.

Exercise 29 continued...

17 **View** the contents of the batch file SHOWME.BAT (located in the PROGRAMS directory).

```
ECHO OFF
CLS
TYPE OPENING.DAT
PAUSE
CLS
TYPE CD.DAT
PAUSE
CLS
TYPE CLS.DAT
PAUSE
CLS
```

18 **Print** the contents of the ASCII file HURRAH.
Force the printer to eject the paper.

19 **Use** DIR with the /S switch and the redirect code (>) to print the contents of your entire disk. The /S switch tells DOS to list files in subdirectories as well as the files in the current directory (see Exercise 34).

- **Type** `DIR/S >PRN` ↵
  The first page (or two) will automatically eject from the printer.
- **Force** the last page to eject.

See the results of step 19 at the end of this exercise.

20 **Format** the Duplicate Learning Disk.

21 **Copy** the entire contents of the "original" Learning Disk to the "duplicate" Learning Disk. Use the *verify switch* and make sure that the original Learning Disk is *write-protected*.

22 **Go on** to Worksheet 11.
If desired, **take** the disk out of drive A: and turn the computer off.

Results for Step 19. Page break may be different.

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX

Directory of A:\

FUN            <DIR>      05-02-93   7:46p (GAMES for DOS 5)
FOOD           <DIR>      05-02-93   7:46p
PROGRAMS       <DIR>      05-22-93   8:41p
JONES    LET           9 05-02-93   7:48p
BAK            <DIR>      05-22-93   8:43p
SMITH    LET           9 05-02-93   8:13p
LOPEZ    LET           9 05-02-93   8:13p
LETTER1                7 05-02-93   8:15p
REPORT3                7 05-02-93   8:16p
LETTER2                7 05-02-93   8:16p
CORN     VEG           8 05-02-93   8:17p
RADISH   VEG          10 05-02-93   8:17p
POTATOES VEG          12 05-02-93   8:18p
PUDDING  DES          11 05-02-93   8:19p
REPORT1                7 05-02-93   8:20p
SMITH    RPT           9 05-02-93   8:20p
SMITH    MEM           9 05-02-93   8:20p
MEMO3                  5 05-02-93   8:21p
LOPEZ    MEM           9 05-02-93   8:21p
LETTER3                7 05-02-93   8:22p
JONES    MEM           9 05-02-93   8:22p
JONES    RPT           9 05-02-93   8:23p
JELLO    DES           9 05-02-93   8:23p
LETTER4                7 05-02-93   8:15p
MEMO1                  5 05-02-93   8:24p
MEMO2                  5 05-02-93   8:24p
REPORT2                7 05-02-93   8:25p
HELLO                 99 05-25-93   9:36p
HURRAH                54 05-02-93   8:40p
NOT                   60 05-25-93   9:37p
       30 file(s)          399 bytes
```

(Results continue on next page.)

Exercise 29 continued...

Exercise 29 (continued)
Practice - LESSON THREE

Results for step 19 (continued)

```
Directory of A:\BAK

.            <DIR>      05-22-93   8:43p
..           <DIR>      05-22-93   8:43p
SMITH    BAK            9 05-02-93   8:20p
LOPEZ    BAK            9 05-02-93   8:19p
JONES    BAK            9 05-02-93   8:23p
CORN     BAK            8 05-02-93   8:17p
RADISH   BAK           10 05-02-93   8:17p
POTATOES BAK           12 05-02-93   8:18p
LOPEZRPT BAK            9 05-02-93   8:19p
POTATOES VEG           12 05-02-93   8:18p
PUDDING  DES           11 05-02-93   8:19p
      11 file(s)          89 bytes

Directory of A:\FOOD

.            <DIR>      05-02-93   7:46p
..           <DIR>      05-02-93   7:46p
VEGGIES      <DIR>      05-02-93   8:27p
GOODIES      <DIR>      05-02-93   8:28p
     4 file(s)              0 bytes

Directory of A:\FOOD\GOODIES

.            <DIR>      05-02-93   8:28p
..           <DIR>      05-02-93   8:28p
       2 file(s)              0 bytes

Directory of A:\FOOD\VEGGIES

.            <DIR>      05-02-93   8:27p
..           <DIR>      05-02-93   8:27p
CABBAGE  VEG           11 05-02-93   8:47p
CARROTS  VEG           11 05-02-93   8:47p
KALE     VEG            8 05-02-93   8:47p
LETTUCE  VEG           11 05-02-93   8:47p
CELERY   VEG           10 05-02-93   8:48p
CORN     VEG            8 05-02-93   8:17p
RADISH   VEG           10 05-02-93   8:17p
POTATOES VEG           12 05-02-93   8:18p
      10 file(s)             81 bytes

Directory of A:\FUN  (or GAMES, if you are using DOS 5)

.            <DIR>      05-02-93   7:46p
..           <DIR>      05-02-93   7:46p
ASTRO    GAM            9 05-02-93   8:48p
CHESS    GAM            9 05-02-93   8:48p
CLUE     FUN            8 05-02-93   8:17p
TRIVIA   FUN           10 05-02-93   8:21p
      6 file(s)              36 bytes

Directory of A:\PROGRAMS

.            <DIR>      05-22-93   8:41p
..           <DIR>      05-22-93   8:41p
CLS      DAT          290 04-22-93   4:05p
OPENING  DAT          319 04-22-93   4:05p
CD       DAT          479 04-22-93   3:57p
SHOWME   BAT          139 04-22-93   3:59p
DB       EXE        31458 04-22-93   3:21p
SS       EXE        31374 04-22-93   3:06p
WP       EXE        31426 04-22-93   3:10p
DATA         <DIR>      05-22-93   8:43p
      10 file(s)         95485 bytes

Directory of A:\PROGRAMS\DATA

.            <DIR>      05-22-93   8:43p
..           <DIR>      05-22-93   8:43p
MEMBER   DB             9 05-25-93   9:28p
CLUB     DB             7 05-25-93   9:29p
MUSIC    DB             8 05-25-93   9:29p
REPORT   DOC           10 05-25-93   9:30p
SCRIPT   DOC           10 05-25-93   9:30p
PAYROLL  WK            10 05-25-93   9:31p
SALES    WK             8 05-25-93   9:31p
AGENDA   DOC           10 05-25-93   9:32p
GRADES   WK             9 05-25-93   9:32p
LETTER4                 7 05-02-93   8:15p
      12 file(s)             88 bytes

Total files listed:
      85 file(s)          96178 bytes
                        XXXXXX bytes free
```

NOTE: Your results may be different if you have a virus-checking program. Some virus-checking programs will automatically put a ***file*** *on your floppy disk in drive A:. It is likely to put its file in a directory that contains executable files—on the Learning Disk, the PROGRAMS directory. You may delete the file if your wish, but it may reappear.*

WORKSHEET 11

EXERCISES 18, 19, 20, and 21

NAME _____

DIRECTIONS: Use the following terms to fill in the blanks below.

COPY	DISKCOPY	filename pattern	COPY files to different directories
wildcards	write-protect	write-protect tab	COPY a group of files to the same directory
target disk	overwrite a file	verify switch (/V)	COPY a file to the same directory
source disk			

1. Symbols that represent different characters or groups of characters in a DOS command. 1. W

2. A combination of *characters* and *wildcards* that represents a group of files. 2. f P

3. The DOS command that duplicates file(s). 3. _____

4. When you COPY files *this way* you have a choice of either keeping the original filename for the duplicate file(s) or renaming the duplicate file(s). 4. C D D

5. When you COPY *this way* you *must* give the duplicate file a new filename. 5. C S A

6. When you COPY *this way* you must give the duplicate files new filenames, and represent the files by using a combination of *wildcards* and *filename characters* (called a *filename pattern*). 6. C S D

7. A small self-adhesive tab that often comes packaged with disk labels and is used to cover the write-enable notch on a 5¼" floppy disk. 7. W P

8. To replace the contents of one file with the contents of another file. 8. C S D

9. The disk to copy <u>from</u> when doing a DISKCOPY. 9. Source

10. To use a procedure that will protect a disk from being changed in any way while still allowing you to read the information on the disk. 10. W P

11. The disk to copy <u>to</u> when doing a DISKCOPY. 11. Target

12. An optional addition to the DISKCOPY command that tells DOS to compare the source and target disks during the copy. 12. /V

13. The DOS command that copies the contents of a floppy disk (the *source* disk) onto another floppy disk (the *target* disk). 13. Disk copy

(This page may be copied.)

WORKSHEET 12

NAME _____

EXERCISES 22, 23, 24, 25, 26, and 27

DIRECTIONS: Use the following terms to fill in the blanks below.

TYPE	FORMAT	UNDELETE
MOVE	ASCII file	DEL (delete)
batch file	program file	REN (rename)

1. To prepare a disk for use by the computer and create a root directory. 1. format

2. The DOS command that lets you view the contents of a file. 2. type

3. The DOS command that recovers files that have been deleted. 3. undelete

4. The DOS command that lets you change a file's name. 4. rename

5. A file that contains executable code that appears as strange-looking symbols when viewed using the TYPE command. 5. program file

6. A file that contains a list of DOS commands that DOS carries out as a set. These files use a .BAT filename extension. 6. batch file

7. A file that contains only text and is free of formatting codes. Also called a *text* file. 7. ascii file

8. The DOS command that removes files from a disk. 8. del

9. The DOS command that moves files from one directory to another directory or renames directories. This feature works only with DOS 6. 9. move

(This page may be copied.)

WORKSHEET 13

NAME _____

LESSON THREE, Questions and Commands

1. Can you use DISKCOPY to copy the contents of the hard disk? 1. no

2. When you use DISKCOPY, must the *source* and *target* disks be the same size and density? 2. yes

3. How can you protect the *source* (original) disk from overwriting its files if you accidentally switch the *source* disk and the *target* disk? 3. write protect the di

4. How do you *write-protect* a 5¼" disk? 4. _____

5. How do you *write-protect* a 3½" disk? 5. _____

6. What can you add to the DISKCOPY command to tell DOS to compare the source and target disks during the copy? 6. /V

7. What DOS command do you use to give you a sense of the files you have and how they move when using COPY, DEL, REN, and MOVE? 7. DIR

8. How can you accidentally lose information when using COPY and MOVE? 8. _____

9. What can you add to the FORMAT command to tell DOS to format a disk to a lower density in a high density disk drive? 9. _____

Use this *directory structure* when necessary to complete the commands below.

```
A:.(root)
    GAMES
    FOOD
        VEGGIES
        GOODIES
    PROGRAMS
        DATA
    BAK
```

WHAT IS THE DOS COMMAND TO:
Assume that the *current* directory is the *root* directory.

10. Diskcopy from drive A: to drive A: and verify the copy. 10. DISKCOPY A: A: /V

11. Copy a file named COOKIES.DES to COOKIES.FUN in the same directory. 11. _____

12. Copy the group of files ending with .LET to files ending with .BAK in the same directory. 12. _____

13. Copy a file named COOKIES.DES from the current directory to the GOODIES directory. 13. COPY COOKIES.DES \FOOD\GOODIES

14. Copy the group of files that end with .MEM from the current directory to the DATA directory. 14. _____

15. Copy the group of files that end with .MEM from the current directory to the BAK directory, and rename them to files that end with .BAK. 15. _____

16. Copy a file named RADISH.VEG from the current directory to the VEGGIES directory and rename it to RADISH.RAD. 16. _____

17. Copy all the files in the current directory to the BAK directory. 17. COPY *.* \BAK

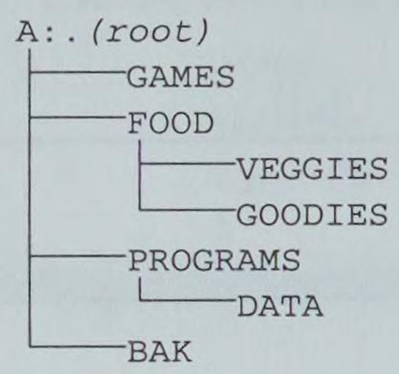
(This page may be copied.)

WORKSHEET 14

NAME _____

LESSON THREE, Commands

Use this *directory structure* when necessary to complete the commands below.



WHAT IS THE COMMAND TO:

Assume that the *current* directory is the *root* directory.

1. Delete a file named CABBAGE.VEG from the current directory. 1. _____
2. Delete the group of files ending with .RPT from the current directory. 2. _____
3. Delete all the files in the current directory. 3. _____
4. Delete a file named CARROTS.VEG from the VEGGIES directory while the root directory is current. 4. _____
5. Recover a file named JONES.LET from the current directory. 5. _____
6. Recover the group of files that end with .BAK from the current directory. 6. _____
7. Rename a file named SMITH.LET to a file named SMITHLET.BAK. 7. _____
8. Rename the group of files that end with .RPT to files that end with .REP. 8. _____
9. Move a file named FRUIT.DES from the current directory to the GOODIES directory. 9. _____
10. Move a group of files that begin with M from the current directory to the BAK directory. 10. _____
11. Rename a directory named BAK to a directory named BAKUP. 11. _____
12. View the contents of a file named HELLO in the current directory. 12. _____
13. View the contents of a file named CHANGE.BAT in the current directory. 13. _____
14. View the contents of a file named SS.EXE in a directory named PROGRAMS. 14. _____
15. View the contents of the AUTOEXEC.BAT file in the root directory on drive C: while drive A: is current. 15. _____
16. Format a *double density* 5¼" (360K) disk in a *high density* disk drive A:. 16. format A:/F:360
17. Format a *double density* 3½" (720K) disk in a *high density* disk drive A:. 17. format A:/F:720
18. Format a *high density* disk in a *high density* disk drive A: 18. format a:

(This page may be copied.)

DOS Lesson Four
Other Useful DOS Commands

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TOPIC 11
Command parts

Command name, parameters, switches, spaces, slashes, backslashes, and colons.

OBJECTIVES:

- identify the three main command parts
- identify four small command parts
- identify commands that use only the command name
- identify commands that require parameters
- identify commands that may include optional parameters and switches
- identify commands that require two sets of parameters

three main command parts
Command name, parameters, and switches.

four small command parts
Space, colon, slash, and backslash.

DOS command
Instructions that tell DOS to perform a task, including:
the command name,
parameters, and
switches.

command name
The *command name* states the action you want DOS to carry out.

parameters
Parameters define the object you want DOS to act on, usually:
a disk drive,
a directory,
a file or group of files, or
a combination of the above.

switches
Modify the way a command performs a task.

ABOUT SPACES — Often DOS does not require a space to separate the main DOS parts if there is another symbol that acts as a signal to do something specific. For example:
a slash (to introduce a switch) or
a backslash (to start a path).

DOS can understand:

this	`DIR \FOOD\VEGGIES`
or this	`DIR\FOOD\VEGGIES`
or this	`DIR FOOD\VEGGIES`
but not this	`DIRFOOD\VEGGIES`

The three main command parts

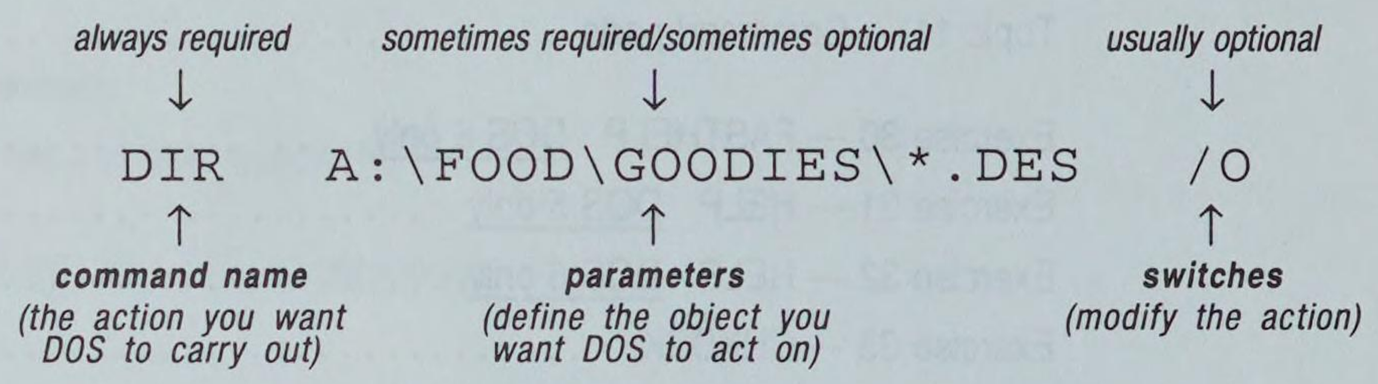
DOS commands have three main parts, but not all commands require every part:

command name (names the action you want DOS to carry out)

parameters (define the object you want DOS to act on)
- the disk drive
- the path
- the filename

switches (modify the action, i.e., the command name)

The **command name** is always required.
Parameters are sometimes required and sometimes optional.
Switches are usually optional.



Four small, but important, command parts

The following characters are part of the system that was developed to help DOS carry out your commands accurately.

spaces

Spaces often **separate** the *main command parts*.
- Spaces *must* be used when DOS would be confused without them.
- Spaces *may* also be used when *you* would be confused without them.

colons
- A *colon* always follows a *drive letter*.
- A *colon* always precedes a switch *option*.

slash (/)
- A *slash* usually precedes a switch.

backslash (\)

The *backslash* is used three ways in the *path*.
- A *backslash* which starts a *path* represents the *root* directory.
- *Backslashes* separate *multiple directories* within a path.
- A *backslash* separates the *last* directory and the *filename* in a path.

This command contains all eight variations of the four *small command parts* described above:

Topic 11 continued...

Some commands use just the command name

CLS (clear screen) and **VER** (display the DOS version) are two commands that use the *command name* only. DIR (directory) is a command that can either use just the *command name*, or use the *command name* with *parameters* and/or *switches*.

Some commands require parameters

Some commands need to tell DOS what object to act on, for example:

DEL	needs at least a filename -	`DEL CORN.VEG`
FORMAT	needs a drive -	`FORMAT B:`
TYPE	needs at least a filename -	`TYPE AUTOEXEC.BAT`

Some commands may include optional parameters and switches

DIR and **TREE** are two commands that can be used either alone or with *parameters* and/or *switches*, for example:

DIR with parameters—tells DOS what to act on, i.e., what directory and/or filenames to list.

```
DIR *.DOC
DIR \FOOD\VEGGIES
DIR A:\FOOD\VEGGIES\*.VEG
```

DIR with switches—modifies the way DIR works, for example, to pause after every screenful, to list files wide, or to list files in order *and* pause.

```
DIR /P
DIR /W
DIR /O/P
```

DIR with parameters and switches—tells DOS what to act on and modifies the way DIR works.

```
DIR C:\DOS /P
DIR \FOOD\VEGGIES /O
DIR *.COM /W
```

Some commands require two sets of parameters

Commands that need two sets of parameters usually need:
a **source parameter** to tell DOS what object to act on and
a **destination parameter** to tell DOS what to do with the object, for example:

RENAME

- needs a **source** filename and a **destination** filename
  `REN COOKIES.DES COOKY.YUM`
  (tells DOS to act on the object (a file), COOKIES.DES, and to rename the object (a file) COOKY.YUM)

COPY

- needs a **source** filename and a **destination** filename:
  `COPY COOKIES.DES COOKY.YUM`
  (tells DOS to act on the object (a file), COOKIES.DES, and to copy the object to a file named COOKY.YUM in the same directory)
- or it needs a **source** filename and a **destination** location:
  `COPY COOKIES.DES \FOOD\GOODIES`
  (tells DOS to act on a file, COOKIE.DES, and to copy the object to a directory named GOODIES)
- or it needs a **source** location and filename, and a **destination** location and filename:
  `COPY \FOOD\VEGGIES\*.VEG \BAKUP\*.BAK`
  (tells DOS to act on the group of files *.VEG, located in the VEGGIES directory, and to copy the group of files to the BAKUP directory and rename the group of files *.BAK)
- or it needs some other combination of the parameters shown above

TOPIC 11 (continued)
Command parts

source parameter
Defines the location of data to be transferred to a specified *destination*. A *source parameter* can consist of:
a drive letter and colon,
a path,
a file or group of files, or
a combination of the above.

destination parameter
Defines the location to which the data specified by the *source parameter* is to be transferred. A *destination parameter* can consist of:
a drive letter and colon,
a path,
a file or group of files, or
a combination of the above.

NOTE: The source parameter always comes before the destination parameter.

EXERCISE 30
DOS 6 only
FASTHELP

Provides *fast* information about DOS commands.

OBJECTIVES:

- display a list of the DOS commands and their definitions
- print the list of the DOS commands and their definitions
- use the FASTHELP command to get information about a DOS command

– Terms and Notes –

NOTE: FASTHELP in DOS version 6 is the same as HELP in DOS version 5.

IMPORTANT: FASTHELP is an **external command**. If you get a **Bad command or file name** message, **C:\DOS** is not in the PATH command of your AUTOEXEC.BAT file. However, you can probably complete this exercise if you **type** PATH C:\DOS ↵ and repeat step 2 (see Exercise 66, page 168).

STEPS to

Display all commands

- Type FASTHELP ↵

Display information about a DOS command

1 Type FASTHELP
2 Press Space
3 Type the name of the command you want information about.
4 Press ↵

DOS 5 users skip Exercise 30.

1 • If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: A:\>

2 **Display a list of DOS commands and their definitions:**

- **Type** FASTHELP ↵
  The first screenful of commands appears, with ---More--- at the bottom of the screen.
- **Press** ↵
  The second screenful of commands appears, with ---More--- at the bottom of the screen.
- **Press** ↵ three more times to view all the commands.
  The DOS prompt appears at the bottom of the screen.
  NOTE: If this command does not work, see IMPORTANT note in "Terms and Notes."

3 • **Clear** the screen (review, Exercise 4).

4 **Print the list of DOS commands and their definitions:**

- **Type** FASTHELP>PRN ↵
  The first page is ejected.
- **Force** the printer to eject the second page (review, Exercise 12).

5 **Use FASTHELP to get information about a command:**

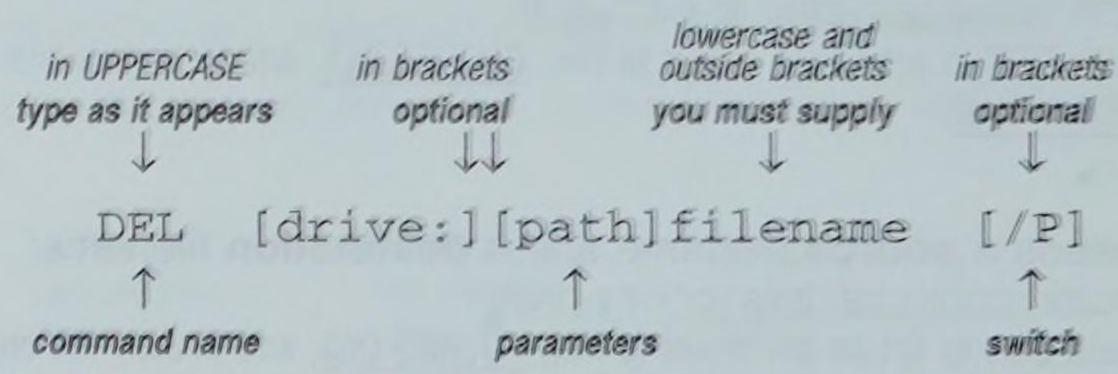
- **Type** FASTHELP DEL ↵

```
1  Deletes one or more files.

2  DEL [drive:][path]filename [/P]
3  ERASE [drive:][path]filename [/P]

4   [drive:][path]filename  Specifies the file(s) to delete.  Specify multiple
                            files by using wildcards.
5    /P                     Prompts for confirmation before deleting each file.
```

line 1 defines the *command name* (the action) in the result box above.
line 2 displays the parts of the DOS command and uses the following system to help you:
- Items in *uppercase* must be typed as they appear.
- Items in *lowercase* and with *no brackets* represent an item which *you* must supply, in this case, a *filename*.
- Items inside the *square brackets* are *optional*.



line 3 shows a different *command name* to do the same job.
line 4 explains the *parameters*.
line 5 explains what the *switch* does.

6 • **Use** FASTHELP to get information about other DOS commands of your choice. Simply type FASTHELP and then the DOS command name.

7 • **Skip** Exercise 31 (for DOS 5 users only) and **go on** to Exercise 32 or **take** the disk out of drive A: and turn the computer off.

DOS 6 users skip Exercise 31

1. • If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2. **Display a list of DOS commands and their definitions:**
   - **Type** HELP ↵
     NOTE: If this command does not work, see IMPORTANT note in "Terms and Notes."
     The first screenful of commands appears, with `---More---` at the bottom of the screen.
   - **Press** ↵
     The second screenful of commands appears, with `---More---` at the bottom of the screen.
   - **Press** ↵ three more times to view all the commands.
     The DOS prompt appears at the bottom of the screen.

3. • **Clear** the screen (review, Exercise 4).

4. **Print the list of DOS commands and their definitions:**
   - **Type** `HELP>PRN` ↵
     The first page is ejected.
   - **Force** the printer to eject the second page (review, Exercise 12).

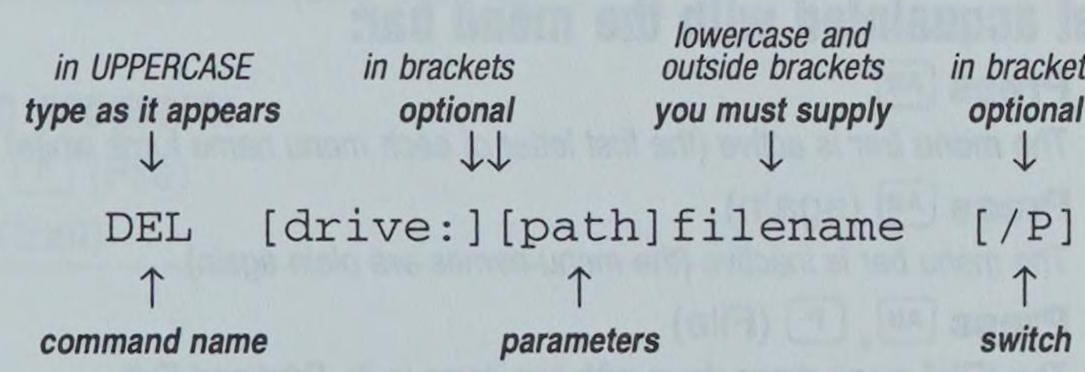
5. **Use HELP to get information about a command:**
   - **Type** `HELP DEL` ↵

```
1  Deletes one or more files.

2  DEL [drive:][path]filename [/P]
3  ERASE [drive:][path]filename [/P]

4   [drive:][path]filename  Specifies the file(s) to delete.  Specify multiple
                            files by using wildcards.
5   /P                      Prompts for confirmation before deleting each file.
```

line 1 defines the *command name* (the action) in the result box above.
line 2 displays the parts of the DOS command and uses the following system to help you:
- Items in *uppercase* must be typed as they appear.
- Items in *lowercase* and with *no brackets* represent an item which *you* must supply, in this case, a *filename*.
- Items inside the *square brackets* are *optional*.



line 3 shows a different *command name* to do the same job.
line 4 explains the *parameters*.
line 5 explains what the *switch* does.

6. • **Use** HELP to get information about other DOS commands of your choice. Simply type HELP and then the DOS command name.

7. • **Skip** Exercise 32 and **go on** to Exercise 33
   or **take** the disk out of drive A: and turn the computer off.

EXERCISE 31
DOS 5 only
HELP

Provides information about DOS commands.

OBJECTIVES:
- display a list of the DOS commands and their definitions
- print the list of the DOS commands and their definitions
- use the HELP command to get information about a DOS command

– Terms and Notes –

NOTE: FASTHELP in DOS version 6 is the same as HELP in DOS version 5.

IMPORTANT: HELP is an **external command**. If you get a **Bad command or file name** message, **C:\DOS** is not in the PATH command of your AUTOEXEC.BAT file. However, you can probably complete this exercise if you **type** C:\DOS ↵ and repeat step 2 (see Exercise 66, page 168).

STEPS to

Display all commands
- Type `HELP` ↵

Display information about a DOS command
1 Type `HELP`
2 Press Space
3 Type the name of the command you want information about.
4 Press ↵

EXERCISE 32
DOS 6 only
HELP

Starts the Help program that provides in-depth help with DOS commands.

OBJECTIVES:

- start the Help program
- use the menu bar
- get information about a DOS command
- print information about a DOS command
- exit the Help program
- use HELP to go directly to information about a command

– Terms and Notes –

syntax
The *language* of DOS commands.

jump
An item in the Help program that is enclosed in *angle brackets*, for example, <Dir>.

Using the keyboard in Help

To move cursor	Press
left one character	←
right one character	→
left one word	Ctrl + ←
right one word	Ctrl + →
up one line	↑
down one line	↓
to beginning of line	Home
to end of line	End
to beginning of topic	Ctrl + Home
to end of topic	Ctrl + End
to next jump	Tab
to previous jump	Shift + Tab
to a jump starting with a certain letter	the letter
to previous jump starting with a certain letter	Shift + letter

To	Press
display information about a DOS command	Move to command & press ↵
go to next topic	Alt + N
go to previous topic	Alt + B
go to contents list	Alt + C
search for text	Alt + S, F
repeat a search	F3
print	Alt + F, P
get help with "Help"	Alt + H
exit Help	Alt + F, X

DOS 5 users skip Exercise 32

DOS 6's HELP program

DOS 6 has a new Help program which offers more in-depth command explanations than you will find with the FASTHELP command. The Help program gives you three kinds of information for most commands:

- syntax — The language of DOS commands.
- notes — Information about how the command works.
- examples — Examples of ways to use the command.

1 • If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 Start the Help program:

- **Type** `HELP` ↵

*IMPORTANT: HELP is an **external command**. If you get a **Bad command or file name** message, **C:\DOS** is not in the PATH command of your AUTOEXEC.BAT file. However, you can probably complete this exercise if you type PATH C:\DOS ↵ and repeat step 2 (see Exercise 66, page 168).*

This Help screen appears:

```
 File  Search                                                        Help
                    MS-DOS Help: Command Reference

Use the scroll bars to see more commands. Or, press the PAGE DOWN key. For
more information about using MS-DOS Help, choose How to Use MS-DOS Help
from the Help menu, or press F1. To exit MS-DOS Help, press ALT, F, X.

<ANSI.SYS>                <Erase>                  <Multi-config>
<Append>                  <Exit>                   <Nlsfunc>
<Attrib>                  <Expand>                 <Numlock>
<Batch commands>          <Fasthelp>               <Path>
<Break>                   <Fastopen>               <Pause>
<Buffers>                 <Fc>                     <Power>
<Call>                    <Fcbs>                   <POWER.EXE>
<Cd>                      <Fdisk>                  <Print>
<Chcp>                    <Files>                  <Prompt>
<Chdir>                   <Find>                   <Qbasic>
<Chkdsk>                  <For>                    <RAMDRIVE.SYS>
<CHKSTATE.SYS>            <Format>                 <Rd>
<Choice>                  <Goto>                   <Rem>
<Cls>                     <Graphics>               <Ren>
<Command>                 <Help>                   <Rename>
<CONFIG.SYS commands>     <HIMEM.SYS>              <Replace>
<Copy>                    <If>                     <Restore>

<Alt+C=Contents> <Alt+N=Next> <Alt+B=Back>                  00006:002
```

*NOTE: This very simple program has a **menu bar** at the top of the screen with three menus: File, Search, and Help.*

3 Get acquainted with the menu bar:

- **Press** Alt
  *The **menu bar** is active (the first letter of each menu name turns white).*
- **Press** Alt (again)
  The menu bar is inactive (the menu names are plain again).
- **Press** Alt, F (**File**)
  The "File" menu drops down with two items in it: Print and Exit.
  *NOTE: The comma between keys means to **press** Alt and then **press** F (one after the other, **not** together).*
- **Press** Alt, S (**Search**)
  The "Search" menu drops down with two items in it: Find... and Repeat Last Find F3.
- **Press** Alt, H (**Help**)
  The "Help" menu drops down with two items in it: How to Use MS-DOS Help and About...
- **Press** Alt twice (or until the menu bar is inactive and the *cursor* is returned to the command list).

Exercise 32 continued...

4 Get information about a command:

- **Press** D
  The cursor jumps to <Date>.
- **Press** ↓ until the cursor is on <Del>.
- **Press** ↵
  The "MS-DOS Help: DEL (Erase)" screen appears.
  *NOTE: You are in the **syntax** information screen, and the cursor is on ◂Notes▸ with ◂Example▸ to the right (**syntax**, **notes**, and **example** are the three kinds of help can get about a DOS command).*
- **Press** ↓ until you reach the bottom of the screen.
- **Press** ↑ until you reach the top of the screen.
  The cursor is back on ◂Notes▸.
- **Press** ↵
  The "MS-DOS Help: DEL--Notes" screen appears with the cursor on ◂Example▸ and with ◂Syntax▸ to the right.
- **Press** ↓ until you reach the bottom of the screen.
- **Press** ↑ until you reach the top of the screen.
  The cursor is back on ◂Example▸.
- **Press** ↵
  The "MS-DOS Help: DEL--Examples" screen appears with the cursor on ◂Syntax▸ and with ◂Notes▸ to the right.
  NOTE: The diamond (♦) at the bottom of the screen indicates the end of a topic.

5 Print information about a command:

- **Press** Alt, F (File)
- **Press** P (Print)
  *The printer **dialog box** appears.*
- **Move** the "dot" to the printer if it is not already there (press ↑).
- **Be sure** that the printer is ready to receive data.
- **Press** ↵
  With the Help program, the printer automatically ejects the paper even though there is not a full page.

6 Return to the commands list and print it:

- **Press** Alt + C (Contents)
- **Print** the commands list (see step 5).

7 Exit the Help program:

- **Press** Alt, F (File)
- **Press** X (Exit)

```
A:\>
```

8 Use HELP to go directly to information about a command:

- **Type** `HELP DEL` ↵
  DOS starts the Help program and moves directly to information about DEL.

9

- **Exit** the Help program (see step 7).

```
A:\>
```

10

- **Go on** to Exercise 33
  or **take** the disk out of drive A: and turn the computer off.

Exercise 32 (continued)
HELP—DOS 6 only

Using the mouse in Help

to scroll the information in the Help window
click the arrows in the scroll bar

to display information about a DOS command
click the desired command

to go to the next topic
click *next* at bottom of screen

to go to the previous topic
click *back* at bottom of screen

to go the contents list
click *contents* at bottom of screen

to search for text
click Search, then Find...

to print
click File, then Print...

to get help with the Help program
click Help, then How to Use MS-DOS Help

to exit Help program
click File, then Exit

to select any item
click it

STEPS to

Display information about a DOS command

FROM THE DOS PROMPT:

1 Type `HELP`
2 Press Space
3 Type the name of the command you want information about.
4 Press ↵

Start the Help program

- Type `HELP` ↵

Exit the Help program

- Press Alt, F, X

EXERCISE 33
CHKDSK (check disk)

Gives you information about your disk and your computer's memory.

OBJECTIVES:

- use CHKDSK to check the DUPLICATE Learning Disk in drive A:
- identify the meaning of each line in a CHKDSK report

– Terms and Notes –

hidden files
Files that are given the "hidden" attribute. The DOS attribute command, ATTRIB, is not covered in this book.

bad sectors
Areas on a disk that DOS marks as unusable when the disk is formatted. A few *bad sectors* do not necessarily make the entire *disk* unusable.

However, a disk with *bad sectors* should not be used as a *target* disk when copying a disk with the DISKCOPY command.

STEPS to

Check a disk

1 Type CHKDSK ↵
2 Press Space
3 Type the letter of the drive to be checked.
4 Press :
5 Press ↵

What does CHKDSK do?

CHKDSK reports:

- the size of your disk (in bytes);
- the number of directories, files, and hidden files;
- bad sectors on your disk (usually unimportant);
- the amount of unused space on your disk; and
- the amount of the *computer's* memory and how much of it is unused.

While CHKDSK can fix certain problems on your disk, this book instructs you to simply examine the report that CHKDSK creates.

❶ • If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

❷ Check your DUPLICATE Learning Disk:

• **Type** CHKDSK A: ↵

*IMPORTANT: CHKDSK is an **external command**. If you get a **Bad command or file name** message, **C:\DOS** is not in the PATH command of your AUTOEXEC.BAT file. However, you can probably complete this exercise if you type PATH C:\DOS ↵ and repeat step 2 (see Exercise 66, page 168).*

The computer works for a few seconds and then displays a report like this:

5¼" High Density Disk (1.2MB)

```
          Volume LEARNING    created 05-02-1993 8:50p
          Volume Serial Number is XXXX-XXXX

line 1       1213952 bytes total disk space
line 2          3584 bytes in 7 directories
line 3        122880 bytes in 57 user files
line 4       1087488 bytes available on disk

line 5           512 bytes in each allocation unit
line 6          2371 total allocation units on disk
line 7          2124 available allocation units on disk

line 8        655360 total bytes memory
line 9        574448 bytes free
```

*NOTE: "Total bytes memory" and "bytes free" may be different. If you are using CHKDSK on a 3½" high density disk, all **disk space** numbers will be different.*

The line items for the result box above tell you:

Line 1 the **exact** total number of bytes on your disk (line 5 x line 6).
(Hidden files, if any exist on your disk, are shown between lines 1 and 2.)

Line 2 how many directories there are on the disk (each directory uses 512 bytes).

Line 3 how many files on the disk and how many bytes they are using.
(Bad sectors, if any exist on your disk, are shown between lines 3 and 4.)

Line 4 how much space is left on the disk (in bytes).

Line 5 how many bytes in each "allocation unit" (the way DOS groups disk space).

Line 6 how many "allocation units" on the disk (line 5 x line 6 = line 1).

Line 7 how many "allocation units" are unused on the disk.

Line 8 the total "conventional" computer memory (in bytes). This number does not reflect added memory that may be available in what is called "extended" computer memory.

Line 9 how much "conventional" computer memory is available.

❸ • **Go on** to Exercise 34
or **take** the disk out of drive A: and turn the computer off.

Finding a file

Do you have any idea where the file named AGENDA.DOC is on the DUPLICATE Learning Disk? What directory would you list to find it?

What if you had 100 directories and you forgot what directory your file was in but you remembered the filename. DIR, with the /S switch, can help you find your files. /S is the DIR switch that instructs DOS to search the *current directory and* directories *under* the *current directory*.

1

- If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 **Use DIR to list all the files on the DUPLICATE Learning Disk:**

The root directory must be current to list *all* the files on the disk.

- **Type** `DIR/S/P` ↵
  DOS lists the first screenful and prompts you to "Press any key to continue..."
- **Press** any key.
  DOS lists the second screenful and prompts you to "Press any key to continue..."
- Continue pressing any key until the DOS prompt appears at the bottom of the screen.

```
A:>\
```

3

- **Clear** the screen (review, Exercise 4).

4 **Find the file named AGENDA.DOC:**

- **Type** `DIR AGENDA.DOC /S` ↵
  NOTE: DOS will look through every directory on the disk to find AGENDA.DOC.
  *DOS lists the **path** to the file, so you can see that AGENDA.DOC is in the DATA directory.*

```
Directory of A:\PROGRAMS\DATA

AGENDA   DOC         10 05-25-93   9:32p
       1 file(s)          10 bytes

Total files listed:
       1 file(s)          10 bytes
                     XXXXXX bytes free
```

5 **Find all the files ending with .DES:**

- **Type** `DIR *.DES /S` ↵
  DOS lists some .DES files in the root directory and some in the GOODIES directory.

```
Directory of A:\

PUDDING  DES         11 05-02-93   8:19p
JELLO    DES          9 05-02-93   8:23p
       2 file(s)          20 bytes

Directory of A:\FOOD\GOODIES

CAKE     DES          8 05-02-93   8:45p
COOKIES  DES         11 05-02-93   8:46p
ICECREAM DES         12 05-02-93   8:46p
PIE      DES          7 05-02-93   8:46p
       4 file(s)          38 bytes

Total files listed:
       6 file(s)          58 bytes
                     XXXXXX bytes free
```

6

- **Go on** to Exercise 35
  or **take** the disk out of drive A: and turn the computer off.

EXERCISE 34 Find files

Locate files when you know the filename but do not know what directory they are in.

OBJECTIVES:

- list all the files on a disk
- find a file when you do not know what directory it is in
- find a group of files that may be in more than one directory

– Terms and Notes –

subdirectory switch (/S)
A switch used with the DIR command that tells DOS to look not only in the *current directory* but in every directory *under* the *current directory* when it lists files. If you are in the *root* directory, DOS will search in every directory on the disk.

NOTE: A file with the same name can exist in different directories — they may or may not contain the same data.

STEPS to

Find a file

1 Change to the root directory.
2 Type `DIR`
3 Press Space
4 Type the filename of the file to find.
5 Press Space
6 Type `/S` ↵
DOS displays the file and the directory the file was found in.

Find a group of files

1 Change to the root directory.
2 Type `DIR`
3 Press Space
4 Type a filename pattern for the group of files to find.
5 Press Space
6 Type `/S` ↵
DOS displays the files and the directory the file was found in.

List every file on a disk

- Type `DIR/S` ↵

EXERCISE 35
Cancel a command

Stop DOS from completing a command.

OBJECTIVES:

- stop a command before DOS has completed it
- stop and start scrolling

STEPS to

Cancel a command

1 Type a DOS command as you normally would.
2 Press Ctrl + C
The command stops, and DOS displays a new DOS prompt.

Canceling or stopping a command

You can stop DOS from completing a command by pressing Ctrl + C or Ctrl + Break. However, actions that DOS has completed *before* you **cancel a command** cannot be undone.

1
- If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 **Cancel the DIR command:**
- **Type** `DIR/S/P` ↵
  DOS lists the first screenful and prompts you to "Press any key to continue..."
- **Press** any key.
  DOS lists the second screenful and prompts you to "Press any key to continue..."
- **Press** Ctrl + C
  The break symbol (^C) appears where DOS got the command to stop.

```
Press any key to continue . . .
^C

A:\>
```

3 **Cancel the CHKDSK command:**
- **Type** `CHKDSK` ↵
- **Quickly press** Ctrl + C
  The break symbol (^C) appears where DOS got the command to stop.

```
^C

A:\>
```

4 **Stop and start scrolling, then cancel a DIR command:**
- **Locate** the Ctrl and S keys and **be ready to hold down** Ctrl while you **tap** S to stop and start the scrolling.
- **Type** `DIR C:/S` ↵
  NOTE: Most hard disks have enough directories and files to list to allow you the time necessary to perform this step.
  Files begin scrolling quickly on the screen.
- **Hold down** Ctrl, and **tap** S about 3 to 5 times, ending with the *scrolling stopped*, then **release** Ctrl.
- **Press** Ctrl + C
  The break symbol (^C) appears where DOS got the command to stop.

```
^C

A:\>
```

- **Repeat** this step a few times. (The first time through, DOS may complete the action before you get a chance to **cancel** the command.)

5
- **Go on** to Exercise 36
  or **take** the disk out of drive A: and turn the computer off.

EXERCISE 36
Repeat a command

Use F3 to quickly reproduce the previous DOS command.

OBJECTIVES:

- repeat the previous command
- repeat the previous command and add to the command
- repeat the previous command and add to the command so it will print

1 • If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 • **Type** `DIR \FOOD\VEGGIES` ↵

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of A:\FOOD\VEGGIES

.            <DIR>      05-02-93   8:27p
..           <DIR>      05-02-93   8:27p
CABBAGE  VEG           11 05-02-93   8:47p
CARROTS  VEG           11 05-02-93   8:47p
KALE     VEG            8 05-02-93   8:47p
LETTUCE  VEG           11 05-02-93   8:47p
CELERY   VEG           10 05-02-93   8:48p
        7 file(s)          51 bytes
                      XXXXXX bytes free
```

3 **Repeat the previous command:**

- **Press** F3

```
A:\>DIR \FOOD\VEGGIES
```

- **Press** ↵

DOS lists the files just as it did in step 2.

4 **Repeat the previous command and add something to it:**

- **Press** F3

```
A:\>DIR \FOOD\VEGGIES
```

- **Type** `/O` ↵

DOS lists the files in alphabetical order.

```
 Directory of A:\FOOD\VEGGIES

.            <DIR>      05-02-93   8:27p
..           <DIR>      05-02-93   8:27p
CABBAGE  VEG           11 05-02-93   8:47p
CARROTS  VEG           11 05-02-93   8:47p
CELERY   VEG           10 05-02-93   8:48p
KALE     VEG            8 05-02-93   8:47p
LETTUCE  VEG           11 05-02-93   8:47p
        7 file(s)          51 bytes
                      XXXXXX bytes free
```

- **Press** F3

```
A:\>DIR \FOOD\VEGGIES/O
```

- **Type** `:S` ↵

DOS lists the files in order by size of file.

```
 Directory of A:\FOOD\VEGGIES

.            <DIR>      05-02-93   8:27p
..           <DIR>      05-02-93   8:27p
KALE     VEG            8 05-02-93   8:47p
CELERY   VEG           10 05-02-93   8:48p
CABBAGE  VEG           11 05-02-93   8:47p
CARROTS  VEG           11 05-02-93   8:47p
LETTUCE  VEG           11 05-02-93   8:47p
        7 file(s)          51 bytes
                      XXXXXX bytes free
```

5 **Print the list of files shown above:**

- **Press** F3

```
A:\>DIR \FOOD\VEGGIES/O:S
```

- **Type** `>PRN` ↵
- **Force** the printer to eject the paper.

6 • **Go on** to Exercise 37
or **take** the disk out of drive A: and turn the computer off.

F3 repeat the previous command

STEPS to

Repeat the previous command

- Press F3 ↵

Repeat the previous command and add something to it

1 Press F3
2 Type the addition to the command.
3 Press ↵

EXERCISE 37
Correct a command

Use F1 to repeat the previous command—one character at a time—and replace, insert, or delete one or more characters.

OBJECTIVES:

- correct a command by *replacing* an incorrect character with the proper one
- correct a command by *deleting* character(s)
- correct a command by *inserting* character(s)
- correct different kinds of errors in the same command
- repeat the remaining command quickly after making corrections

– Terms and Notes –

NOTE: You must have completed a command by pressing [↵] before you can use this method to make corrections.

Correcting commands with [F1]

You typed a long command, pressed enter, and then discovered that you made a mistake in the second character. You do not want to type the whole command out again. What can you do?
Use F1 to repeat the previous command—one character at a time—and make alterations to the command along the way.

- to replace characters, type the new character(s)
- to delete characters, press delete
- to insert characters, press insert and type the new character(s)

After making a correction, you can quickly repeat the *remaining* command characters by pressing [F3].

1 • If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 **Change one character in the previous command:**

- **Type** `DIR *.XES` [↵]

```
File not found
```

- **Press** [F1] 6 times (repeat up to, but not including, X)

```
DIR *.
```

- **Type** `D`

```
DIR *.D
```

- **Press** [F1] 2 more times to complete the command.

```
DIR *.DES
```

- **Press** [↵]

```
 Directory of A:\

PUDDING  DES         11 05-02-93   8:19p
JELLO    DES          9 05-02-93   8:23p
        2 file(s)          20 bytes
                       XXXXXX bytes free
```

3 **Change one character and use [F3] to complete the command:**

- **Type** `DIR \GOOD\VEGGIES\CARROTS.VEG` [↵]

```
Path not found
```

- **Press** [F1] 5 times (repeat up to, but not including, G)

```
DIR \
```

- **Type** `F`

```
DIR \F
```

- **Press** [F3] (to quickly repeat the remaining command)

```
DIR \FOOD\VEGGIES\CARROTS.VEG
```

- **Press** [↵]

```
 Directory of A:\FOOD\VEGGIES

CARROTS  VEG         11 05-02-93   8:47p
        1 file(s)          11 bytes
                       XXXXXX bytes free
```

STEPS to

Steps to are on the next page.

Exercise 37 continued...

❹ Delete a character in the previous command:

- **Type** DIR \GFOOD\VEGGIES\CARROTS.VEG ↵

```
Path not found
```

- **Press** F1 5 times (repeat up to, but not including, G)

```
DIR \
```

- **Press** Del

Nothing seems to happen, but you just deleted the G.

- **Press** F3

```
DIR \FOOD\VEGGIES\CARROTS.VEG
```

- **Press** ↵

```
 Directory of A:\FOOD\VEGGIES

CARROTS  VEG         11 05-02-93   8:47p
       1 file(s)          11 bytes
                       XXXXXX bytes free
```

❺ Insert a character in the previous command:

- **Type** DIR \FOOD\EGGIES\CARROTS.VEG ↵

```
Path not found
```

- **Press** F1 10 times (repeat up to, but not including, E)

```
DIR \FOOD\
```

- **Press** Ins
- **Type** V

```
DIR \FOOD\V
```

- **Press** F3

```
DIR \FOOD\VEGGIES\CARROTS.VEG
```

- **Press** ↵

```
 Directory of A:\FOOD\VEGGIES

CARROTS  VEG         11 05-02-93   8:47p
       1 file(s)          11 bytes
                       XXXXXX bytes free
```

❻ Replace more than one character to correct a command:

- **Type** DOE \FOOD\FOODIES*.DES ↵

```
Bad command or file name
```

- **Press** F1

```
D
```

- **Type** IR

```
DIR
```

- **Press** F1 7 times (up to but not including the F in FOODIES)

```
DIR \FOOD\
```

- **Type** G

```
DIR \FOOD\G
```

- **Press** F3

```
DIR \FOOD\GOODIES\*.DES
```

- **Press** ↵

```
 Directory of A:\FOOD\GOODIES

CAKE     DES           8 05-02-93   8:45p
COOKIES  DES          11 05-02-93   8:46p
ICECREAM DES          12 05-02-93   8:46p
PIE      DES           7 05-02-93   8:46p
       4 file(s)          38 bytes
                       XXXXXX bytes free
```

Exercise 37 continued...

STEPS to

Replace a character to correct a command

1 Press F1 until you are one character before the incorrect character.
2 Type the correct character.
3 Press F3

Delete a character to correct a command

1 Press F1 until you are one character before the character to delete.
2 Press Del
3 Press F3

Insert a character to correct a command

1 Press F1 until you are one character before the location to insert a character.
2 Press Ins
3 Type the new character.
4 Press F3

7 **Insert more than one character to correct a command:**

- **Type** D *.LET ↵

```
Bad command or file name
```

- **Press** F1 once
- **Press** Ins
- **Type** IR
- **Press** F3 ↵

```
 Directory of A:\

JONES    LET          9 05-02-93   7:48p
SMITH    LET          9 05-02-93   8:13p
LOPEZ    LET          9 05-02-93   8:13p
       3 file(s)          27 bytes
                       XXXXXX bytes free
```

8 **Delete more than one character to correct a command:**

- **Type** DIRRR SMITH.* ↵

```
Bad command or file name
```

- **Press** F1 2 times (up to the first R)
- **Press** Del Del F3 ↵

```
 Directory of A:\

SMITH    LET          9 05-02-93   8:13p
SMITH    RPT          9 05-02-93   8:20p
SMITH    MEM          9 05-02-93   8:20p
       3 file(s)          27 bytes
                       XXXXXX bytes free
```

9 **Correct different kinds of errors in a command:**

- **Type** DR \FOODS\GOODIES*.DEZ

```
Bad command or file name
```

- **Press** F1

```
D
```

- **Press** Ins
- **Type** I

```
DI
```

- **Press** F1 7 times (up to but not including the S)

```
DIR \FOOD
```

- **Press** Del

Nothing seems to happen, but you just deleted the S.

- **Press** F3

```
DIR \FOOD\GOODIES\*.DEZ
```

- **Press** BkSp

```
DIR \FOOD\GOODIES\*.DE
```

- **Type** S

```
DIR \FOOD\GOODIES\*.DES
```

- **Press** ↵

```
 Directory of A:\FOOD\GOODIES

CAKE     DES          8 05-02-93   8:45p
COOKIES  DES         11 05-02-93   8:46p
ICECREAM DES         12 05-02-93   8:46p
PIE      DES          7 05-02-93   8:46p
       4 file(s)          38 bytes
                       XXXXXX bytes free
```

10 • **Go on** to Exercise 38
or **take** the disk out of drive A: and turn the computer off.

Running programs

Programs (also called applications) are stored on disks in files that have extensions of .EXE, .BAT, or .COM, for example, WP.EXE or AUTOEXEC.BAT.

You tell DOS to run a program simply by typing the program's filename — without the period and extension. To run WP.EXE, for example, just type WP and press [↵].

When you type a program's filename, DOS looks for the file in the current directory. If the program is stored in a different directory, you can *change* to its directory before you run the program (CD\PROGRAMS), or you can *type* the path to the directory in front of the program's filename (\PROGRAMS\WP).

If you use a program a lot, it is common to put its directory in a **path** that DOS searches whenever an external command or program filename is issued. The PATH command is examined in Lesson 7, Automating DOS.

1 • If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 **Find the program files on the DUPLICATE Learning Disk:**

• **Type** `DIR *.EXE /S` [↵]

DOS lists three "mock" program files that were put on this disk for you to work with.

```
Directory of A:\PROGRAMS
DB       EXE     31458 04-22-93   3:21p
SS       EXE     31374 04-22-93   3:06p
WP       EXE     31426 04-22-93   3:10p
        3 file(s)      94258 bytes
Total files listed:
        3 file(s)      94258 bytes
                     XXXXXX bytes free
```

3 **Run a program that is in a different directory:**

• **Type** `\PROGRAMS\WP` [↵]

```
                    * * * Word Processing Program * * *
If this was a real word processing program
you would use it to:
    * Type in text to create documents.
    * Edit (revise) what you have typed.
    * Format text (such as underline, bold, and center).
    * Save your documents to disk files.
    * Print your documents.
Press <Enter> to exit this program ?
```

• **Press** [↵]

```
A:\>
```

4 **Run a file that is in the current directory:**

• **Change** to the PROGRAMS directory (review, Exercise 14).

```
A:\PROGRAMS>
```

• **Type** `DB` [↵]

```
                    * * * Database Program * * *
If this was a real database program
you would use it to:
    * Create a record structure for a database file.
    * Add data into the records.
    * Find and modify database records.
    * Query the database -- ask it to show specific records.
    * Create and print reports that summarize the records.
Press <Enter> to exit this program ?
```

• **Press** [↵]

```
A:\PROGRAMS>
```

Exercise 38 continued...

EXERCISE 38
Run a program

Load a program into the computer's memory and start it.

OBJECTIVES:

- find program files that use .EXE extensions
- run a program in a different directory
- run a program in the current directory
- examine a *batch* program file
- run a *batch* program file

– Terms and Notes –

program (also, application)
A set of instructions that your computer carries out to perform a specific task, such as word processing. Programs are saved as files with filename extensions of:

.EXE (for execution file),
.BAT (for batch file), or
.COM (for command file).

NOTE: Every time you use an **external** DOS command, you are **running a program**. External DOS commands have either a .COM or .EXE filename extension.

STEPS to

Run a program in the current directory

1 Type the program's filename—without the period or extension.
2 Press [↵]

Run a program that is not in the current directory

1 Type the path to the program file.
2 Type \
3 Type the program's filename—without the period or extension.
4 Press [↵]

Exercise 38 (continued)
Run a program

batch file
A text file that contains a list of DOS commands that DOS carries out as a set when you run it. Batch files are given a .BAT filename extension when they are created.

5 Examine a BATCH program file:

- **Type** DIR *.BAT ↵

```
 Directory of A:\PROGRAMS
SHOWME   BAT       139 04-22-93   3:59p
       1 file(s)        139 bytes
                     XXXXXX bytes free
```

- **Type** TYPE SHOWME.BAT ↵

```
ECHO OFF
CLS
TYPE OPENING.DAT
PAUSE
CLS
TYPE CD.DAT
PAUSE
CLS
TYPE CLS.DAT
PAUSE
CLS
```

NOTE: Batch files are a series of DOS command that DOS executes one after the other. Do you recognize some of the commands used in the SHOWME.BAT batch file above? CLS and TYPE are two commands you should be familiar with. What does PAUSE do? Use HELP to get information about PAUSE.

- DOS 6 users: **Type** FASTHELP PAUSE ↵
  DOS 5 users: **Type** HELP PAUSE ↵

```
Suspends processing of a batch program and displays the message "Press any
key to continue...."
PAUSE
```

6 Run a "batch" program file:

- **Type** SHOWME ↵

```
                    DOS COMMANDS & EXAMPLES

This batch file program uses the TYPE command
to show DOS commands and examples.
You can press any key until you get to the command you want help on.
Press any key to continue . . .
```

- **Press** any key.

```
                    CD -- CHANGE DIRECTORY

Use the CD command to:
  * show the current directory
  * change to a specified directory
examples:
=========
CD           show current directory
CD\DOS       change to the DOS directory
CD..         change to the parent directory
CD Level2    change to the LEVEL2 directory below current directory
Press any key to continue . . .
```

- **Press** any key.

```
                    CLS -- CLEAR SCREEN

Use the CLS command to clear the screen and show the DOS prompt at
the top of the screen.
example:
========
CLS
Press any key to continue . . .
```

- **Press** any key.

```
A:\PROGRAMS>
```

7 • **Change** to the root directory.

```
A:\>
```

8 • **Go on** to Exercise 39
or **take** the disk out of drive A: and turn the computer off.

1. • If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 Display the computer's date:

- **Type** DATE ↵

DOS displays "Current date" (yours is different) and prompts you to "Enter new date:"

```
Current date is Fri 07-09-1993
Enter new date (mm-dd-yy):
```

- **Press** ↵

DOS returns you to the DOS prompt without changing the date.

```
A:\>
```

3 Change to an incorrect date:

- **Type** DATE ↵

DOS displays "Current date" (yours is different) and prompts you to "Enter new date:"

```
Current date is Fri 07-09-1993
Enter new date (mm-dd-yy):
```

Notice the prompt (mm-dd-yy):

mm means to type the **month** using two numbers (to represent a month that has only one number (May) you may either enter a single digit (5) or put a zero before a single digit (05)).

dd means to type the **day of the month** using two numbers (again, to represent a day that has only one number you may either enter a single digit or put a zero (0) before a single digit).

yy means to type the **year** using the last two numbers of the year.

- means to type a hyphen (-) between the month and day, and the day and year, as the prompt shows.

- **Type** 01-31-99 ↵

DOS changes the date and returns you to the DOS prompt.

```
A:\>
```

4 Change the computer's date to today's date:

- **Type** DATE ↵

DOS displays "Current date" and prompts you to "Enter new date:"

```
Current date is Sun 01-31-1999
Enter new date (mm-dd-yy):
```

- **Type** the number for today's month.
- **Type** -
- **Type** today's day (the number, not the day of the week).
- **Type** -
- **Type** the last two digits of the current year.
- **Press** ↵

```
A:\>
```

5. • **Display** the computer's date (review, step 2). Do not change the date again; just press ↵ to return to the DOS prompt.

6. • **Go on** to Exercise 40
or **take** the disk out of drive A: and turn the computer off.

EXERCISE 39
DATE

Displays or changes the computer's date.

OBJECTIVES:

- display the computer's date
- change to an incorrect date
- change the computer's date to the correct date

– Terms and Notes –

date parameters
The objects you want DOS to act on in the *DATE command*, that is, the *month*, *day*, and *year*. The format that DOS uses for the date is mm-dd-yy. To enter the date for October 5, 1994, for example, type:

```
10-05-94 or
10-5-94
```

STEPS to

Display the date

- Type DATE ↵ ↵

Set the date

1 Type DATE ↵
2 Type the number for today's month.
3 Type - (hyphen)
4 Type the number for today's day.
5 Type - (hyphen)
6 Type the last two numbers of the current year.
7 Press ↵

EXERCISE 40
TIME

Displays or sets the computer's time.

OBJECTIVES:

- display the computer's time
- set an incorrect time
- enter a time that DOS does not understand
- set the computer's time to the current time

– Terms and Notes –

time parameters
The objects you want DOS to act on in the *TIME command*, that is, the *hour*, *minutes*, *seconds*, *hundredths*, and *a (am)* or *p (pm)*.
The format DOS uses for time is:
hour:minutes:seconds.hundredths a|p

You need not enter the seconds and hundredths to set the time. To enter the time for 3:05 pm, for example, type:

```
03:05p or
3:5p
```

STEPS to

Display the time
- Type `TIME` ↵ ↵

Set the time
1 Type `TIME` ↵
2 Type the number for the current hour.
3 Type :
4 Type the number for the current minute.
5 Type `A` (for am) or `P` (for pm).
6 Press ↵

1 • If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 **Display the computer's time:**

- **Type** `TIME` ↵
  DOS displays "Current time" and prompts you to "Enter new time:"

```
Current time is  7:34:01.50p
Enter new time:
```

- **Press** ↵ (again)
  DOS returns you to the DOS prompt without changing the time.

```
A:\>
```

3 **Change to an incorrect time:**

- **Type** `TIME` ↵

```
Current time is  7:44:56.50p
Enter new time:
```

The following options are available in the *time* format:
hours:minutes:seconds.hundredths**a|p**

However, you may enter only:
hours:minutes**a|p**
(**a|p** means to use either ***a*** (for am) or ***p*** (for pm))

- **Type** `3:5P` ↵
  DOS returns you to the DOS prompt (without letting you see the new time).

```
A:\>
```

4 **Display the new time:**

- **Type** `TIME` ↵ ↵

```
Current time is  3:05:02.14p
Enter new time:
A:\>
```

5 **Purposely enter a time that DOS does not understand:**

- **Type** `TIME` ↵
  DOS reports the "Current time" and prompts you to "Enter new time:"
- **Type** `4:99P` ↵
  DOS reports that you entered an "Invalid time" and prompts you to "Enter new time:"

```
Invalid time
Enter new time:
```

- **Press** ↵

6 **Enter the correct time:**

- **Type** `TIME` ↵
  DOS reports the "Current time" and prompts you to "Enter new time:"
- **Type** the number for the current hour.
- **Type** :
- **Type** the number for the current minute.
- **Type** `A` (if it is am) or `P` (if it is pm).
- **Press** ↵
- **Repeat** step 4 to check the time if you desire.

7 • **Go on** to Exercise 41
or **take** the disk out of drive A: and turn the computer off.

Disk volume labels

When you format your disk, you are given an opportunity to *name* your disk at the end of the format procedure. It is common *not* to give a disk a *volume name*. However, a name (volume label) can be useful for keeping track of disks, especially if a disk happens to lose its sticky label. You can easily change the *volume label* at any time by using the LABEL command (see the next exercise).

1 • If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 **Display the volume label for the DUPLICATE Learning Disk:**

• **Type** VOL ↵

```
Volume in drive A is LEARNING
Volume Serial Number is XXXX-XXXX
```

3 **Display the volume label for the hard disk:**

• **Type** VOL C: ↵

DOS displays the volume label for the hard disk. Does it have a name?

NOTE: If a disk has no volume label, DOS displays this message:

Volume in drive X has no label

4 • **Go on** to Exercise 42
or **take** the disk out of drive A: and turn the computer off.

EXERCISE 41
VOL (volume)

Displays the disk's volume label (if it exists) and serial number.

OBJECTIVES:

- display the floppy disk's volume label
- display the hard disk's volume label

– Terms and Notes –

volume label
A name you assign to a disk.

serial number
A number that DOS assigns to a disk when it is formatted. The serial number cannot be changed unless you reformat the disk.

volume
The term used by DOS to represent a disk when giving it a name (label).

NOTE: If your disk has no **label**, DOS will tell you that the drive has "no label" when you use the VOL command. However, if your disk has no **serial number**, DOS will not display a line for it.

STEPS to

Display the volume label for the current disk

• Type VOL ↵

Display the volume label for a disk drive that is not current

1 Type VOL
2 Press Space
3 Type the drive letter that you want to display the volume label on.
4 Type :
5 Press ↵

EXERCISE 42
LABEL

Creates, changes, or removes a disk's name (volume label).

OBJECTIVES:

- change the floppy disk's name
- display the floppy disk's name
- remove the floppy disk's name
- create a name for the floppy disk

Labeling your disks

You may create, change, or delete your disk's name (volume label) at any time using the LABEL command. The name can contain up to 11 characters including:

- the letters A to Z
- the numbers 0 through 9
- the symbols $ - _ { } and #
- and spaces

1

- If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 **Change the label on the DUPLICATE Learning Disk:**

- **Type** `LABEL A: DISK #1` ↵
  Drive A:'s light comes on, and DOS returns you to the DOS prompt.

```
A:\>
```

*IMPORTANT: LABEL is an **external command**. If you get a **Bad command or file name** message, **C:\DOS** is not in the PATH command of your AUTOEXEC.BAT file. However, you can probably complete this exercise if you type PATH C:\DOS ↵ and repeat step 2 (see Exercise 66, page 168).*

- **Type** `VOL` ↵

```
 Volume in drive A is DISK #1
 Volume Serial Number is XXXX-XXXX
```

3 **Remove the volume label from the disk in drive A:**

- **Type** `LABEL` ↵

```
Volume in drive A is DISK #1
Volume Serial Number is XXXX-XXXX
Volume label (11 characters, ENTER for none)?
```

- **Press** ↵
  Since there is currently a label, DOS asks you if you want to delete the label.

```
Delete current volume label (Y/N)? Y
```

- **Press** `Y` ↵

```
A:\>
```

- **Type** `VOL` ↵
  DOS reports that the disk in drive A: has no label.

```
 Volume in drive A has no label
 Volume Serial Number is XXXX-XXXX
```

4 **Create the floppy disk's original label:**

- **Type** `LABEL LEARNING` ↵
  NOTE: Since drive A: is current, you do not need to put A: in the command even though we did in step 2.

```
A:\>
```

- **Type** `VOL` ↵

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
```

5

- **Go on** to Exercise 43
  or **take** the disk out of drive A: and turn the computer off.

STEPS to

Create or change the current disk's name

1 Type `LABEL`
2 Press Space
3 Type the volume name.
4 Press ↵

Remove the current disk's name

1 Type `LABEL` ↵
DOS prompts you to ENTER for none (no name)
2 Press ↵
DOS prompts: Delete current volume label (Y/N)?
3 Type `Y`
4 Press ↵

EXERCISE 43
Practice

LESSON FOUR
Other Useful DOS Commands

OBJECTIVE:

- review the following tasks from the exercises in Lesson Four:

  FASTHELP (**DOS 6**)
  HELP (**DOS 5**)
  CHKDSK
  Find files
  Cancel a command
  Repeat a command
  Repeat a command and add to it
  Correct a command:
    replace a character
    insert a character
    delete a character
  Run a program
  DATE
  TIME
  VOL
  LABEL

The COMMANDS to perform each step are listed in Appendix F. Try to complete the exercise without looking at the Appendix for help.

1. If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2. - **Issue** the DIR command with *switches* to **show** files in subdirectories and **pause** after each screenful—display only the first screenful.
   DOS displays the first screenful and prompts you to "Press any key to continue . . ."
   - **Cancel** the command.

```
Press any key to continue . . .
^C

A:\>
```

3. **Display** information about the REN command quickly (DOS 6 users use FASTHELP; DOS 5 users use HELP).

```
Renames a file or files.
RENAME [drive:][path]filename1 filename2
REN [drive:][path]filename1 filename2
Note that you cannot specify a new drive or path for your destination file.
```

4. **Check** the DUPLICATE Learning Disk.
   DOS gives you a report similar to the one shown in Exercise 33, step 2.

5. **Type** `DIR \PROGRAMS\DATA\*.DOC` ↵

```
REPORT   DOC          10 05-25-93   9:30p
SCRIPT   DOC          10 05-25-93   9:30p
AGENDA   DOC          10 05-25-93   9:32p
       3 file(s)           30 bytes
                     XXXXXX bytes free
```

6. **Quickly repeat** the command in step 5 (result will match the one above).

7. **Find** the MUSIC.DB file.

```
Directory of A:\PROGRAMS\DATA
MUSIC    DB           8 05-25-93   9:29p
       1 file(s)            8 bytes
Total files listed:
       1 file(s)            8 bytes
                     XXXXXX bytes free
```

8. **Find** all the files that end with .GAM on the disk.

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
Directory of A:\
CLUE     GAM          8 05-02-93   8:17p
TRIVIA   GAM         10 05-02-93   8:21p
OLDMAID  GAM         11 05-02-93   8:23p
       3 file(s)           29 bytes
Directory of A:\GAMES
ASTRO    GAM          9 05-02-93   8:48p
CHESS    GAM          9 05-02-93   8:48p
JEOPARDY GAM         12 05-02-93   8:49p
       3 file(s)           30 bytes
Total files listed:
       6 file(s)           59 bytes
                     XXXXXX bytes free
```

Exercise 43 continued...

9 Repeat the previous command and add to it so that the output will be printed:

- **Be sure** the printer is turned on and ready to receive data.
- **Quickly repeat** the command in step 8. Do not press enter yet.

```
DIR *.GAM /S
```

- **Type** >PRN ↵
- **Force** the printer to eject the paper.
  The result will match the result in step 8.

10 **Type** DIR MELLO.DES

```
File not found
```

11 **Correct** the command in step 10 to DIR JELLO.DES without retyping it.

```
JELLO    DES          9 05-02-93   8:23p
       1 file(s)              9 bytes
                        XXXXXX bytes free
```

12 **Type** DIR MITH.MEM ↵

```
File not found
```

13 **Correct** the command in step 12 to SMITH.MEM without retyping it.

```
SMITH    MEM          9 05-02-93   8:20p
       1 file(s)              9 bytes
                        XXXXXX bytes free
```

14 **Type** DIRF TRIVIA.GAM ↵

```
Bad command or file name
```

15 **Correct** the command in step 14 to DIR TRIVIA.GAM without retyping it.

```
TRIVIA   GAM         10 05-02-93   8:21p
       1 file(s)             10 bytes
                        XXXXXX bytes free
```

16 Run a program:

- **Change** to the PROGRAMS directory.

```
A:\PROGRAMS>
```

- **Run** the SS.EXE file.

```
                    * * * Spreadsheet Program * * *

If this was a real spreadsheet program

you would use it to:

     * Type in numbers to be calculated.
     * Type formulas to specify how the numbers will be calculated.
     * Save your spreadsheets to disk files.
     * Print your spreadsheets.

Press <Enter> to exit this program ?
```

- **Change** back to the root directory.

```
A:\>
```

17 **Display** the computer's date.

```
Current date is Day mm-dd-yyyy
Enter new date (mm-dd-yy):

A:\>
```

Exercise 43 continued...

18 **Display** the computer's time.

```
Current time is  hh:mm:ss:xxa|p
Enter new time:

A:\>
```

19 **Display** the *volume label* for the DUPLICATE Learning Disk.

```
Volume in drive A is LEARNING
Volume Serial Number is XXXX-XXXX
```

20 **Display** the *volume label* for the *hard disk*.

```
Volume in drive C is xxxxxxxxxxx
Volume Serial Number is XXXX-XXXX
```

21 **Change** the *volume label* of the disk in drive A: to DATADISK #3.

22 **Display** the *volume label* for the disk in drive A:.

```
Volume in drive A is DATADISK #3
Volume Serial Number is XXXX-XXXX
```

23 **Change** the *volume label* of the disk in drive A: back to LEARNING.

24 **Display** the *volume label* for the disk in drive A:.

```
Volume in drive A is LEARNING
Volume Serial Number is XXXX-XXXX
```

25 **Go on** to Worksheet 15.
If desired, **take** the disk out of drive A: and turn the computer off.

WORKSHEET 15

NAME _____

TOPIC 11 and EXERCISES 30, 31, 32, 33 and 34

DIRECTIONS: Use the following terms to fill in the blanks below. One answer is used more than once.

switch	Find files	command parts	four small command parts
HELP	DOS command	source parameter	subdirectory switch (/S)
CHKDSK	command name	destination parameter	three main command parts
parameter	FASTHELP	bad sectors	hidden files

1. DOS 5 only: Provides information about DOS commands. 1. _____

2. DOS 6 only: Provides "fast" information about DOS commands. 2. _____

3. States the action you want DOS to carry out. 3. _____

4. Defines the object you want DOS to act on. 4. _____

5. Modifies the way a command performs a task. 5. _____

6. Instructions that tell DOS to perform a task. 6. _____

7. Gives you information about your disk and your computer's memory. 7. _____

8. Locate files when you know the filenames but do not know what directory they are in. 8. _____

9. Defines the location to which the data specified by the *source parameter* is to be transferred. 9. _____

10. The switch that tells DOS to look in the *current directory* and every directory under the *current directory* when it lists files. 10. _____

11. Command name, parameters, switches, spaces, slashes, backslashes, and colons. 11. _____

12. Defines the location of data to be transferred to a specified *destination*. 12. _____

13. Command name, parameters, and switches. 13. _____

14. Space, colon, slash, and backslash. 14. _____

15. DOS 6 only: Starts the Help program. 15. _____

16. Files that are given the hidden attribute. 16. _____

17. Areas on a disk that DOS marks as unusable when the disk is formatted. 17. _____

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WORKSHEET 16

NAME _____

EXERCISES 35, 36, 37, 38, 39, 40, 41 and 42

DIRECTIONS: Use the following terms to fill in the blanks below.

TIME	volume label	date parameters	batch file	Cancel a command
DATE	serial number	volume	Run a program	Correct a command
LABEL	VOL (volume)	time parameters	program	Repeat a command

1. The objects DOS acts on in the *time command*. 1. _____

2. Displays the disks volume label and serial number, if they exist. 2. _____

3. Use F1 to repeat the previous command—one character at a time—and replace, insert, or delete one or more characters. 3. _____

4. Displays or changes the computer's date. 4. _____

5. The objects DOS acts on in the *date command*. 5. _____

6. A number that DOS assigns to a disk when it is formatted. 6. _____

7. A term used by DOS to represent a disk when giving it a name (label). 7. _____

8. Creates, changes, or removes a disk's name (volume label). 8. _____

9. Stop DOS from completing a command. 9. _____

10. Use F3 to quickly reproduce the previous DOS command. 10. _____

11. A name you assign to a disk. 11. _____

12. Displays or sets the computer's time. 12. _____

13. A file that contains a list of DOS commands that DOS carries out as a set when you run it. They are saved with a .BAT filename extension. 13. _____

14. A set of instructions that your computer carries out to perform a specific task, such as word processing. 14. _____

15. Load a program into the computer's memory and start it. 15. _____

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WORKSHEET 17

NAME _____

TOPIC 11, Questions

1. What are the three main parts of DOS commands?

   1. 1)_____
      2)_____
      3)_____

2. Which main command part *defines* the *object* you want DOS to act on?

   2. _____

3. Which main command part *states* the *action* you want DOS to carry out?

   3. _____

4. Which main command part *modifies* the *way a command performs* a task?

   4. _____

5. Which main command part is *usually optional*?

   5. _____

6. Which main command part is *sometimes required* and *sometimes optional*?

   6. _____

7. Which main command part is *always* required?

   7. _____

8. List the four *small* DOS command parts.

   8. 1)_____
      2)_____
      3)_____
      4)_____

9. Which *small* command part represents the *root* directory?

   9. _____

10. Which *small* command part always follows a *drive letter*?

    10. _____

11. Which *small* command part is sometimes, but not always, used to separate *main* command parts?

    11. _____

12. Which *small* command part is used to separate *multiple directories in a path*?

    12. _____

13. Which *small* command part comes before a *switch*?

    13. _____

14. Which *small* command part comes before a *switch* <u>*option*</u>?

    14. _____

15. Which *small* command part is used to separate the *last directory in a path from the filename*?

    15. _____

16. What kind of parameter defines the location to which the data specified by the source parameter is to be transferred.

    16. _____

17. What kind of parameter defines the location of data to be transferred to a specified destination?

    17. _____

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WORKSHEET 18

NAME _____

LESSON FOUR, Questions and Commands

1. What DOS command provides information about DOS commands? 1. _____

2. What DOS command gives you information about your disk and the computer's memory? 2. _____

3. How do you stop DOS from completing a command? 3. _____

4. What switch do you use with DIR to make DOS search every directory on a disk? 4. _____

5. What function key repeats the previous DOS command? 5. _____

6. What function key repeats the previous DOS command one character at a time so you can correct mistakes or make changes in a command? 6. _____

WHAT IS THE COMMAND (OR SPECIAL KEYS USED) TO:

7. Display a list of DOS commands with short definitions. 7. _____

8. Get information about the COPY command. 8. _____

9. Check the disk on drive A:. 9. _____

10. Find the file named MEMBER.DB. 10. _____

11. Find all the files that end with .EXE on a disk. 11. _____

12. Stop DOS from completing a command (cancel a command). 12. _____

13. Repeat a command. 13. _____

14. Correct a command. 14. _____

15. Display the computer's date (include ENTERs). 15. _____

16. Change the computer's date to August 5, 1998 (include ENTERs). 16. _____

17. Display the computer's time (include ENTERs). 17. _____

18. Change the computer's time to 11:15 am (include ENTERs). 18. _____

19. Display the *volume label* on the disk in the *current* drive. 19. _____

20. Display the *volume label* on drive C:. 20. _____

21. Change the name of the disk in the *current* drive to MYDISK. 21. _____

22. Run a program named FUN.EXE that is in the current directory. 22. _____

23. Run a "batch" program named CHANGE.BAT that is in the subdirectory PROGS. 23. _____

(This page may be copied.)

DOS Lesson Five
Organizing Files

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TOPIC 12
Organize files

Use filenames, filename extensions, and directories to arrange your files.

OBJECTIVES:

- identify two methods used to organize files
- identify the different ways filenames are used to group files on the Learning Disk
- identify why directories are important for grouping files on the hard disk
- identify how directories are used to group files on the Learning Disk

– Terms and Notes –

filename
The name you assign to a collection of data that you store on a disk.

filename extension
The optional "period and up to three characters" at the end of a filename.

What does file organization involve?

Organizing files involves grouping files in some order that makes sense to you. Files are organized using two techniques:

- creating a **file naming** system that allows you to *group* files, with special attention to **filename extensions**, and
- creating a **directory** system to hold groups of files, that is, a **directory structure**.

Organizing files using filenames

The name you give your files should describe the contents of the files, and beyond that, it is worth taking time to design a file naming system that helps you *group* files. As you have seen in past lessons, *filename extensions* are especially useful for helping you to work with *groups* of files when using certain DOS commands, such as DIR, COPY, DEL, and REN.

Most of the *files* on the Learning Disk have *filename extensions* that give you a clue about the kind of files they are. For example:

files ending with	*are*
.DES	dessert files
.VEG	vegetable files
.GAM	game files
.LET	letter files
.MEM	memo files
.RPT	report files
.EXE	execution files
.BAT	batch files
.DAT	data files used by *batch* files
.DB	database data files
.WK	spreadsheet data files
.DOC	word processing data files

Some *files* on the Learning Disk can be grouped using either the first part of the *filename* or the *filename extension*. For example:

organized by first part of filename	*OR*	*organized by filename extension*
SMITH.LET		SMITH.**LET**
SMITH.MEM		JONES.**LET**
SMITH.RPT		LOPEZ.**LET**
JONES.LET		SMITH.**MEM**
JONES.MEM		JONES.**MEM**
JONES.RPT		LOPEZ.**MEM**
LOPEZ.LET		SMITH.**RPT**
LOPEZ.MEM		JONES.**RPT**
LOPEZ.RPT		LOPEZ.**RPT**

Some *files* on the Learning Disk have no *filename extension*, but can still be grouped. For example,

LETTER1	MEMO1	REPORT1
LETTER2	MEMO2	REPORT2
LETTER3	MEMO3	REPORT3

Some *files* on the Learning Disk cannot be grouped in a meaningful way by using their filenames. However, they can be organized (or grouped) by placing them in a separate directory. For example:

HELLO
HURRAH
NOT

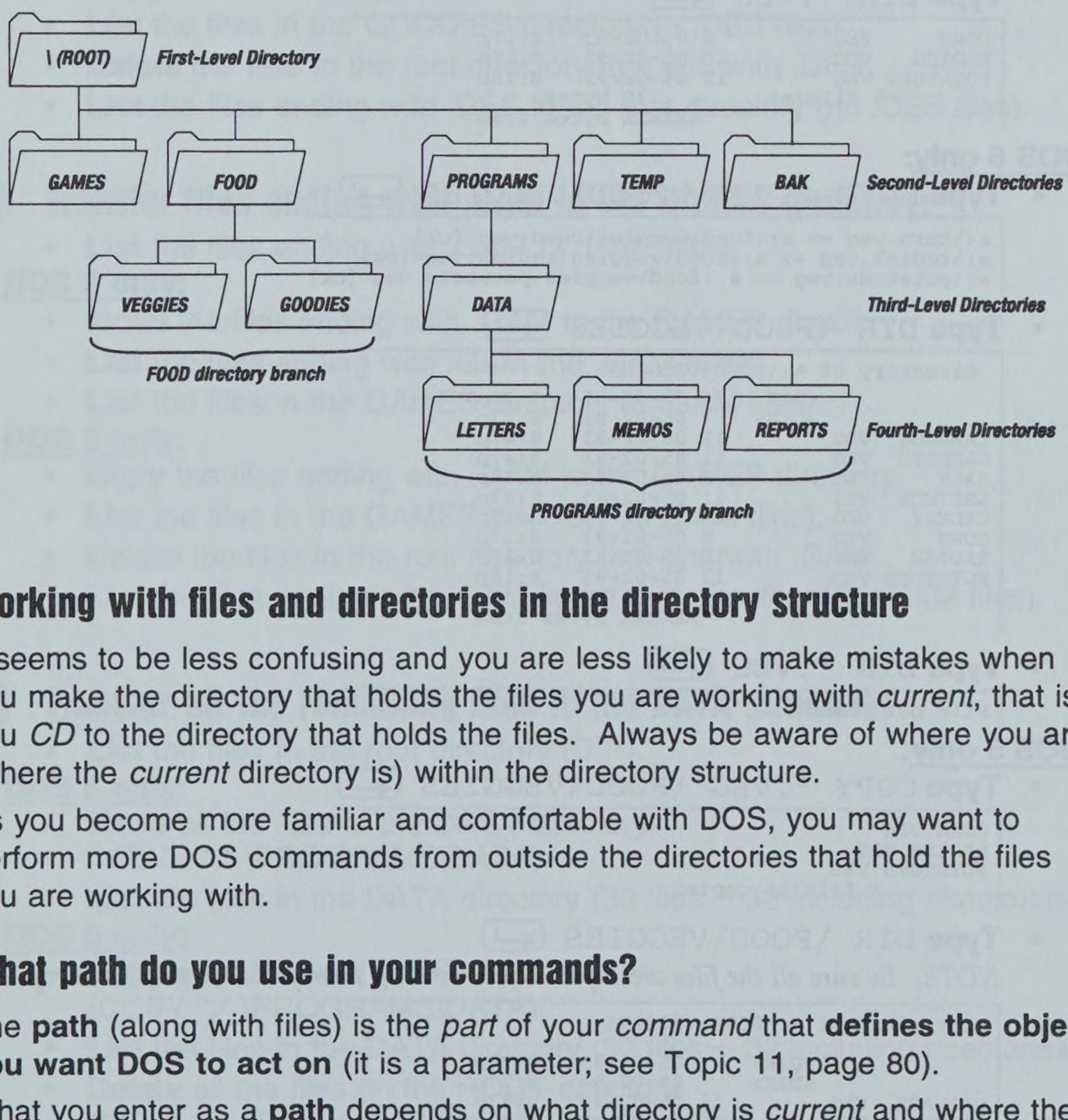
Topic 12 continued...

Organizing files using directories

Directories are very useful for organizing files, especially on the hard disk because of the hard disk's large capacity. While you can organize files on floppy disks by using *different disks* for *different subjects*, it is sometimes useful to use directories on floppy disks too.

At the heart of organizing files is the *directory structure*. You can see that the *directory structure* below provides a certain organization for the files on the Learning Disk:

- game files — go in the GAMES directory
- food files — go in the VEGGIES and GOODIES directories in the FOOD branch
- program files — go in the PROGRAMS directory
- data files — go in the DATA directory in the PROGRAMS branch
- letter files — go in the LETTERS directory
- memo files — go in the MEMOS directory
- report files — go in the REPORTS directory
- backup files — go in the BAK directory
- temporary files — go in the TEMP directory



Working with files and directories in the directory structure

It seems to be less confusing and you are less likely to make mistakes when you make the directory that holds the files you are working with *current*, that is, you *CD* to the directory that holds the files. Always be aware of where you are (where the *current* directory is) within the directory structure.

As you become more familiar and comfortable with DOS, you may want to perform more DOS commands from outside the directories that hold the files you are working with.

What path do you use in your commands?

The **path** (along with files) is the *part* of your *command* that **defines the object you want DOS to act on** (it is a parameter; see Topic 11, page 80).

What you enter as a **path** depends on what directory is *current* and where the directory that you want to access is in relation to the *current* directory.

with the path, you direct DOS	using
- to a subdirectory	the name of the subdirectory
- to the root directory	\
- to a different directory branch	\ and the path *from the root directory*
- down more than one directory level	the path *from the current directory*

NOTE: In any situation, you can use the entire path to a directory — starting from the root (\) directory. Although you may have to do a little extra typing, you may find it less confusing to use the entire path. Generally, this book instructs you to use the most direct path.

Topic 12 (continued)
Organize files

directory
The part of the disk structure that holds files that are stored on a disk. Directories can also hold other directories (sometimes called subdirectories).

directory structure
The organization of directories on a disk. Also called directory tree.

directory levels
The layers of directory levels, starting with the root directory as level one.

directory branch
A directory and all the levels of directories that are under it.

path
The list of directories that DOS goes through to find a file or directory.

current directory
The directory you are working from.

EXERCISE 44
Empty the root directory

Transfer all files from the root directory to other directories.

OBJECTIVES:

- transfer all the .VEG files to the VEGGIES directory
- transfer all the .DES files to the GOODIES directory
- transfer all the .GAM files to the GAMES directory
- transfer all the remaining files to the DATA directory

– Terms and Notes –

transfer files
To move files from one directory to another directory so that the files are removed from the original directory.
DOS 6 users may use the MOVE command to complete the transfer in one step, while DOS 5 users must first use COPY and then DEL to complete the transfer.

NOTE: It is a good idea to use the DIR command to *list* the contents of the directories that files are being *transferred* to and from.

STEPS to

Transfer files from one directory to another directory

DOS 6 users:

1 List the files to be transferred.
2 **Move** the files to the receiving directory.
3 List the files in the receiving directory.
4 List the files in the original directory (you will get a *Files not found* message).

DOS 5 users:

1 List the files to be transferred.
2 **Copy** the files to the receiving directory.
3 List the files in the receiving directory.
4 **Delete** the files in the original directory.
5 List the files in the original directory (you will get a *Files not found* message).

Imitate the hard disk

In this exercise you will use the floppy disk in drive A: as an imitation mini hard disk environment. On the hard disk, it is a good practice to keep only *directories* and a few *system files* in *root* directory, and to store all *data files* and *program files* in directories other than the root directory.

You will **transfer** all the files on the *root* directory on the DUPLICATE Learning Disk to other appropriate directories. To *transfer* files, DOS 6 users will use the MOVE command, while DOS 5 users will use the COPY and DEL commands. All commands used in this exercise have been covered in previous exercises.

1

- **DISKCOPY** the original Learning Disk to the DUPLICATE Learning Disk (review, Exercise 18).
- **Access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 Transfer files ending with .VEG to the VEGGIES directory:

- **Type** `DIR *.VEG` ↵

```
CORN      VEG          8 05-02-93    8:17p
RADISH    VEG         10 05-02-93    8:17p
POTATOES  VEG         12 05-02-93    8:18p
        3 file(s)             30 bytes
                      XXXXXX bytes free
```

DOS 6 only:

- **Type** `MOVE *.VEG \FOOD\VEGGIES` ↵

```
a:\corn.veg => a:\food\veggies\corn.veg [ok]
a:\radish.veg => a:\food\veggies\radish.veg [ok]
a:\potatoes.veg => a:\food\veggies\potatoes.veg [ok]
```

- **Type** `DIR \FOOD\VEGGIES` ↵

```
 Directory of A:\FOOD\VEGGIES
.             <DIR>      05-02-93    8:27p
..            <DIR>      05-02-93    8:27p
CABBAGE   VEG           11 05-02-93    8:47p
CARROTS   VEG           11 05-02-93    8:47p
KALE      VEG            8 05-02-93    8:47p
LETTUCE   VEG           11 05-02-93    8:47p
CELERY    VEG           10 05-02-93    8:48p
CORN      VEG            8 05-02-93    8:17p
RADISH    VEG           10 05-02-93    8:17p
POTATOES  VEG           12 05-02-93    8:18p
       10 file(s)             81 bytes
                      XXXXXX bytes free
```

- **Type** `DIR *.VEG` ↵

```
File not found
```

DOS 5 only:

- **Type** `COPY *.VEG \FOOD\VEGGIES` ↵

```
CORN.VEG
RADISH.VEG
POTATOES.VEG
        3 file(s) copied
```

- **Type** `DIR \FOOD\VEGGIES` ↵
  NOTE: Be sure all the files are copied before deleting them from the root directory.

```
 Directory of A:\FOOD\VEGGIES
.             <DIR>      05-02-93    8:27p
..            <DIR>      05-02-93    8:27p
CABBAGE   VEG           11 05-02-93    8:47p
CARROTS   VEG           11 05-02-93    8:47p
KALE      VEG            8 05-02-93    8:47p
LETTUCE   VEG           11 05-02-93    8:47p
CELERY    VEG           10 05-02-93    8:48p
CORN      VEG            8 05-02-93    8:17p
RADISH    VEG           10 05-02-93    8:17p
POTATOES  VEG           12 05-02-93    8:18p
       10 file(s)             81 bytes
                      XXXXXX bytes free
```

Exercise 44 continued...

DOS 5 only: (continued)

- **Type** DEL *.VEG ↵
- **Type** DIR *.VEG ↵

```
File not found
```

❸ Transfer files ending with .DES to the GOODIES directory:

NOTE: These instructions are less exact than those in step 2. Please refer back to step 2 if you need help in completing this step. Solutions for steps 3, 4, and 5 are in Appendix E.

- **List** the files ending with .DES (2 .DES files).

DOS 6 only:

- **Move** the files ending with .DES to the GOODIES directory.
- **List** the files ending with .DES (no .DES files).
- **List** the files in the GOODIES directory (6 .DES files).

DOS 5 only:

- **Copy** the files ending with .DES to the GOODIES directory.
- **List** the files in the GOODIES directory (6 .DES files).
- **Delete** the files in the root directory that end with .DES.
- **List** the files ending with .DES in the root directory (no .DES files).

❹ Transfer files ending with .GAM to the GAMES directory:

- **List** the files ending with .GAM (3 .GAM files).

DOS 6 only:

- **Move** the files ending with .GAM to the GAMES directory.
- **List** the files ending with .GAM (no .GAM files).
- **List** the files in the GAMES directory (6 .GAM files).

DOS 5 only:

- **Copy** the files ending with .GAM to the GAMES directory.
- **List** the files in the GAMES directory (6 .GAM files).
- **Delete** the files in the root directory that end with .GAM.
- **List** the files ending with .GAM in the root directory (no .GAM files).

❺ Transfer all the remaining files to the DATA directory:

- **List** the files in the root directory (DIR).

DOS 6 only:

- **Move** all the files to the DATA directory.
  (MOVE *.* \PROGRAMS\DATA)
- **List** the files in the DATA directory (30 files — 32 including directories).

DOS 5 only:

- **Copy** all the files to the DATA directory.
  (COPY *.* \PROGRAMS\DATA)
- **List** the files in the DATA directory (30 files — 32 including directories).
- **Delete** all the files on the ROOT directory.
  (DEL *.* — DOS asks if you are sure? — Type Y)

DOS 6 *and* DOS 5:

- **List** the contents of the root directory.
  DOS displays 4 directories, but no files—even though it reports "4 file(s)" (remember that DOS counts directories and files together when it reports the number of file(s)).

```
 Directory of A:\

GAMES          <DIR>      05-02-93   7:46p
FOOD           <DIR>      05-02-93   7:46p
PROGRAMS       <DIR>      05-22-93   8:41p
BAK            <DIR>      05-22-93   8:43p
        4 file(s)              0 bytes
                           XXXXXX bytes free
```

Exercise 44 continued...

Exercise 44 (continued)
Empty the root directory

WARNING: DO NOT EMPTY THE *ROOT* DIRECTORY ON DRIVE C: OF ALL FILES. Certain system files are essential on the hard disk, and moving them can make your computer system unusable.

NOTE: When transferring files, a good rule to follow is: if you do not know the purpose of a file, do not *move* or *delete* it.

directory structure for Exercise 44

```
A:.
├─GAMES
├─FOOD
│  ├─VEGGIES
│  └─GOODIES
├─PROGRAMS
│  └─DATA
└─BAK
```

summary of files transferred in Exercise 44

files transferred	*from directory*	*to directory*
*.VEG	root	VEGGIES
*.DES	root	GOODIES
*.GAM	root	GAMES
.	root	DATA

Exercise 44 (continued)
Empty the root directory

6 **Print a list showing all files on the disk:**

- **Type** `DIR /S>PRN` ↵
  The first page is ejected.
- **Force** the printer to eject the second page.

Page breaks may vary.

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX

Directory of A:\

GAMES          <DIR>      05-02-93   7:46p
FOOD           <DIR>      05-02-93   7:46p
PROGRAMS       <DIR>      05-22-93   8:41p
BAK            <DIR>      05-22-93   8:43p
        4 file(s)              0 bytes

Directory of A:\BAK

.              <DIR>      05-22-93   8:43p
..             <DIR>      05-22-93   8:43p
        2 file(s)              0 bytes

Directory of A:\FOOD

.              <DIR>      05-02-93   7:46p
..             <DIR>      05-02-93   7:46p
VEGGIES        <DIR>      05-02-93   8:27p
GOODIES        <DIR>      05-02-93   8:28p
        4 file(s)              0 bytes

Directory of A:\FOOD\GOODIES

.              <DIR>      05-02-93   8:28p
..             <DIR>      05-02-93   8:28p
CAKE     DES           8 05-02-93   8:45p
COOKIES  DES          11 05-02-93   8:46p
ICECREAM DES          12 05-02-93   8:46p
PIE      DES           7 05-02-93   8:46p
PUDDING  DES          11 05-02-93   8:19p
JELLO    DES           9 05-02-93   8:23p
        8 file(s)             58 bytes

Directory of A:\FOOD\VEGGIES

.              <DIR>      05-02-93   8:27p
..             <DIR>      05-02-93   8:27p
CABBAGE  VEG          11 05-02-93   8:47p
CARROTS  VEG          11 05-02-93   8:47p
KALE     VEG           8 05-02-93   8:47p
LETTUCE  VEG          11 05-02-93   8:47p
CELERY   VEG          10 05-02-93   8:48p
CORN     VEG           8 05-02-93   8:17p
RADISH   VEG          10 05-02-93   8:17p
POTATOES VEG          12 05-02-93   8:18p
       10 file(s)             81 bytes

Directory of A:\GAMES

.              <DIR>      05-02-93   7:46p
..             <DIR>      05-02-93   7:46p
ASTRO    GAM           9 05-02-93   8:48p
CHESS    GAM           9 05-02-93   8:48p
JEOPARDY GAM          12 05-02-93   8:49p
CLUE     GAM           8 05-02-93   8:17p
TRIVIA   GAM          10 05-02-93   8:21p
OLDMAID  GAM          11 05-02-93   8:23p
        8 file(s)             59 bytes
```

```
Directory of A:\PROGRAMS

.              <DIR>      05-22-93   8:41p
..             <DIR>      05-22-93   8:41p
CLS      DAT         290 04-22-93   4:05p
OPENING  DAT         319 04-22-93   4:05p
CD       DAT         479 04-22-93   3:57p
SHOWME   BAT         139 04-22-93   3:59p
DB       EXE       31458 04-22-93   3:21p
SS       EXE       31374 04-22-93   3:06p
WP       EXE       31426 04-22-93   3:10p
DATA           <DIR>      05-22-93   8:43p
       10 file(s)          95485 bytes

Directory of A:\PROGRAMS\DATA

.              <DIR>      05-22-93   8:43p
..             <DIR>      05-22-93   8:43p
MEMBER   DB           9 05-25-93   9:28p
CLUB     DB           7 05-25-93   9:29p
MUSIC    DB           8 05-25-93   9:29p
REPORT   DOC         10 05-25-93   9:30p
SCRIPT   DOC         10 05-25-93   9:30p
PAYROLL  WK          10 05-25-93   9:31p
SALES    WK           8 05-25-93   9:31p
AGENDA   DOC         10 05-25-93   9:32p
GRADES   WK           9 05-25-93   9:32p
JONES    LET          9 05-02-93   7:48p
SMITH    LET          9 05-02-93   8:13p
LOPEZ    LET          9 05-02-93   8:13p
LETTER1               7 05-02-93   8:15p
REPORT3               7 05-02-93   8:16p
LETTER2               7 05-02-93   8:16p
LOPEZ    RPT          9 05-02-93   8:19p
REPORT1               7 05-02-93   8:20p
SMITH    RPT          9 05-02-93   8:20p
SMITH    MEM          9 05-02-93   8:20p
MEMO3                 5 05-02-93   8:21p
LOPEZ    MEM          9 05-02-93   8:21p
LETTER3               7 05-02-93   8:22p
JONES    MEM          9 05-02-93   8:22p
JONES    RPT          9 05-02-93   8:23p
MEMO1                 5 05-02-93   8:24p
MEMO2                 5 05-02-93   8:24p
REPORT2               7 05-02-93   8:25p
HELLO                99 05-25-93   9:36p
HURRAH               54 05-02-93   8:40p
NOT                  60 05-25-93   9:37p
       32 file(s)            432 bytes

Total files listed:
       78 file(s)          96115 bytes
                         XXXXXX bytes free
```

7

- **Go on** to Exercise 45
  or take the disk out of drive A: and turn the computer off.

1 • If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 **Make new directories in the root directory:**

• **Type** `MD TEMP` ↵
DOS works a little and then, without reporting success, displays a new prompt.

```
A:\>
```

• **List** the contents of the directory to see if the TEMP directory is there.
DOS created the file in the first unused space it found—where JONES.LET used to be.

```
 Directory of A:\

GAMES          <DIR>      05-02-93   7:46p
FOOD           <DIR>      05-02-93   7:46p
PROGRAMS       <DIR>      05-22-93   8:41p
TEMP           <DIR>      XX-XX-XX   X:XXX
BAK            <DIR>      05-22-93   8:43p
        5 file(s)              0 bytes
                          XXXXXX bytes free
```

NOTE: DOS puts the TEMP directory in the first available location—the spot where JONES.LET used to be. This is an opportunity to point out that when this occurs, JONES.LET can no longer be ***recovered*** *(if you are using the default UNDELETE protection level).*

3 • **Type** `MD NEWDIR` ↵
DOS works a little and displays a new prompt.

```
A:\>
```

• **List** the contents of the *current* (root) directory.
DOS lists the new directory at the bottom of the list of directories.

```
 Directory of A:\

GAMES          <DIR>      05-02-93   7:46p
FOOD           <DIR>      05-02-93   7:46p
PROGRAMS       <DIR>      05-22-93   8:41p
TEMP           <DIR>      XX-XX-XX   X:XXX
BAK            <DIR>      05-22-93   8:43p
NEWDIR         <DIR>      XX-XX-XX   X:XXX
        6 file(s)              0 bytes
                          XXXXXX bytes free
```

4 **Make new directories in a different directory:**
(make three directories in the DATA directory)

• **Type** `CD \PROGRAMS\DATA` ↵
(to change to the DATA directory)

```
A:\PROGRAMS\DATA>
```

• **Type** `MD LETTERS` ↵
• **Type** `MD MEMOS` ↵
• **Type** `MD REPORTS` ↵
• **List** the contents of the *current* (DATA) directory.
DOS lists the three new directories at the bottom of the list of files in the DATA directory.

```
HURRAH                 54 05-02-93   8:40p
NOT                    60 05-25-93   9:37p
LETTERS        <DIR>      XX-XX-XX   X:XXX
MEMOS          <DIR>      XX-XX-XX   X:XXX
REPORTS        <DIR>      XX-XX-XX   X:XXX
       35 file(s)            432 bytes
                        XXXXXX bytes free
```

• **Change** to the *root* directory.

```
A:\>
```

5 • **Go on** to Exercise 46
or **take** the disk out of drive A: and turn the computer off.

EXERCISE 45

MD (make directory)

Creates a directory.

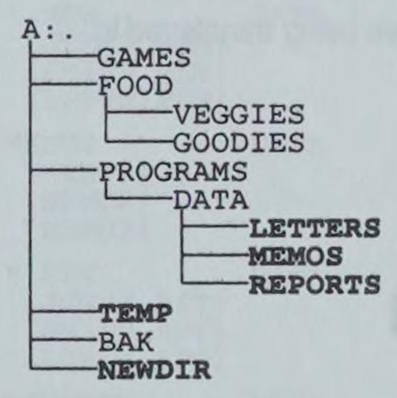
OBJECTIVES:
- make directories in the *root* directory
- make directories in the DATA directory
- use DIR to list the new directories

– Terms and Notes –

NOTE: MD is an abbreviation of the DOS command MKDIR, which works just like MD.

rules for directory names
- the directory name can be up to 8 characters
- you **cannot** use these characters:
  `. " / \ [ ] " * | < > + = ; , ?`
- you **cannot** use a space
- you **can** use an extension of a period and up to three characters

Directory structure at the end of Exercise 45
(new directories are bolded)



STEPS to

Create a directory below the current directory
1 Change to the directory you want to create a new directory in.
2 Type `MD`
3 Press Space
4 Type the directory's name
5 Press ↵

EXERCISE 46
Transfer files

Move files from one directory to another directory and remove the files from the original directory.

OBJECTIVES:

- display the new directory structure
- transfer *letter files* from the DATA directory to the LETTERS directory
- transfer *memo files* from the DATA directory to the MEMOS directory
- transfer *report files* from the DATA directory to the REPORTS directory
- copy files to a new directory
- create a new directory
- transfer files into a new directory

– Terms and Notes –

NOTE: DOS 6 users can use the MOVE command to complete the transfer in one step, while DOS 5 users must first COPY and then DEL the files to complete the transfer.

NOTE: It is always a good idea to use the DIR command to *list* the contents of the directories that files are being *transferred* to and from.

STEPS to

Transfer files

DOS 6 users:

1 List the files to be transferred.
2 **Move** the files to the receiving directory.
3 List the files in the receiving directory.
4 List the files in the original directory (you will get a *Files not found* message).

DOS 5 users:

1 List the files to be transferred.
2 **Copy** the files to the receiving directory.
3 List the files in the receiving directory.
4 **Delete** the files in the original directory.
5 List the files in the original directory (you will get a *Files not found* message).

Transferring files is serious

It is not hard to accidentally transfer files to the wrong place. In this exercise, you are instructed to work in the DATA directory. The directories you are transferring files to (LETTERS, MEMOS, and REPORTS) are all subdirectories of the DATA directory. When you transfer files to a subdirectory, you can name the *directory* you are copying or moving files to without listing the entire *path* to the directory. However, you are less likely to misdirect files if you use the entire path to a directory (from the root) when directing DOS where to send your files. For example, to copy files ending with .LET from the DATA directory to the LETTERS subdirectory, you can type either:

```
COPY *.LET LETTERS                    ←quicker
COPY *.LET \PROGRAMS\DATA\LETTERS     ←safer
```

1

- If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 Display the new directory structure:

- **Type** `TREE` ↵

```
A:.
    GAMES
    FOOD
        VEGGIES
        GOODIES
    PROGRAMS
        DATA
            LETTERS  ←
            MEMOS    ← subdirectories of DATA
            REPORTS  ←
    TEMP     ← subdirectory of root
    BAK
    NEWDIR   ← subdirectory of root
```

3 Transfer letter files from DATA directory to LETTERS directory:

(the *letter* files either end with .LET or begin with LETTER)

NOTE: To transfer files, DOS 6 users may use the MOVE command, while DOS 5 users must use COPY and DEL.

- **Type** `CD \PROGRAMS\DATA` ↵

```
A:\PROGRAMS\DATA>
```

- **Type** `DIR *.LET` ↵

```
 Directory of A:\PROGRAMS\DATA
JONES    LET          9 05-02-93   7:48p
SMITH    LET          9 05-02-93   8:13p
LOPEZ    LET          9 05-02-93   8:13p
       3 file(s)           27 bytes
                     XXXXXX bytes free
```

- **Type** `DIR LETTER?` ↵

```
 Directory of A:\PROGRAMS\DATA
LETTER1               7 05-02-93   8:15p
LETTER2               7 05-02-93   8:16p
LETTER3               7 05-02-93   8:22p
LETTERS       <DIR>     XX-XX-XX   X:XXX
       4 file(s)           21 bytes
                     XXXXXX bytes free
```

DOS 6 only:

- **Type** `MOVE *.LET LETTERS` ↵
  DOS reports each file moved with an [ok] at the end of the line.
- **Type** `MOVE LETTER? LETTERS` ↵
  DOS reports each file moved with an [ok] at the end of the line. DOS also tried to "move" the LETTERS directory and reported that it was [Unable to open source].

DOS 5 only:

- **Type** `COPY *.LET LETTERS` ↵
  DOS reports 3 file(s) copied.
- **Type** `COPY LETTER? LETTERS` ↵
  DOS reports 3 file(s) copied.

Exercise 46 continued...

DOS 6 *and* DOS 5:

- **Type** DIR LETTERS ↵

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of A:\PROGRAMS\DATA\LETTERS

.            <DIR>      XX-XX-XX   X:XXX
..           <DIR>      XX-XX-XX   X:XXX
JONES    LET             9 05-02-93   7:48p
SMITH    LET             9 05-02-93   8:13p
LOPEZ    LET             9 05-02-93   8:13p
LETTER1                  7 05-02-93   8:15p
LETTER2                  7 05-02-93   8:16p
LETTER3                  7 05-02-93   8:22p
       8 file(s)             48 bytes
                          XXXXXX bytes free

A:\PROGRAMS\DATA>
```

DOS 5 only:

- **Type** DEL *.LET ↵
  DOS displays a new DOS prompt, but does not report deleted files.
- **Type** DEL LETTER? ↵
  DOS displays a new DOS prompt, but does not report deleted files.

DOS 6 *and* DOS 5:

- **Type** DIR *.LET ↵

```
File not found
```

- **Type** DIR LETTER? ↵

```
 Directory of A:\PROGRAMS\DATA

LETTERS      <DIR>      XX-XX-XX  XX:XXX
       1 file(s)              0 bytes
                         XXXXXX bytes free
```

4 Transfer memo files from DATA directory to MEMOS directory:

(the *memo* files either end with .MEM or begin with MEMO)

*WARNING: When you "group" files using wildcards, sometimes files you do not want to include in your "group" fit your **filename pattern**. For example, if you use the **filename pattern** MEM*.* to group the MEMO files in the DATA directory, the file MEMBER.DB will be included in the group. However, if you use the **filename pattern**, MEMO?, only MEMO files will be included in the group. This situation points out why it is a good idea to use the DIR command to check the results of your **filename patterns** before you COPY, MOVE, or DELete a "group" of files.*

NOTE: These instructions are more general than those in step 3. Use concepts covered in step 3 if you need help completing this step. Solution in Appendix H.

The DATA directory should be *current*, and this prompt should still be displayed: A:\PROGRAMS\DATA>

- **List** the files that *end* with .MEM.
- **List** the files that *begin* with MEMO.

DOS 6 only:

- **Move** files that *end* with .MEM to the MEMOS directory.
- **Move** files that *begin* with MEMO to the MEMOS directory.
- **List** the contents of the MEMOS directory.
  DOS lists 6 memo files.

DOS 5 only:

- **Copy** files that *end* with .MEM to the MEMOS directory.
- **Copy** files that *begin* with MEMO to the MEMOS directory.
- **List** the contents of the MEMOS directory.
  DOS lists 6 memo files.
- **Delete** files in the DATA directory that *end* with .MEM.
- **Delete** files in the DATA directory that *begin* with MEMO.

DOS 6 *and* DOS 5:

- **List** the files that *end* with .MEM.
  DOS reports "File not found."
- **List** the files that *begin* with MEMO.
  DOS lists the MEMO directory, but no MEMO files.

Exercise 46 continued...

summary of files transferred in Exercise 46

files transferred	*from directory*	*to directory*
*.LET (JONES.LET) (SMITH.LET) (LOPEZ.LET)	DATA	LETTERS
LETTER? (LETTER1) (LETTER2) (LETTER3)	DATA	LETTERS
*.MEM (JONES.MEM) (SMITH.MEM) (LOPEZ.MEM)	DATA	MEMOS
MEMO? (MEMO1) (MEMO2) (MEMO3)	DATA	MEMOS
*.RPT (JONES.RPT) (SMITH.RPT) (LOPEZ.RPT)	DATA	REPORTS
REPORT? (REPORT1.RPT) (REPORT2.RPT) (REPORT3.RPT)	DATA	REPORTS
HELLO	DATA	MISC
HURRAH	DATA	MISC
NOT	DATA	MISC

Exercise 46 (continued)
Transfer files

IMPORTANT: When you organize files, there may sometimes be a conflict about which *directory* you want to put a particular file in. Such is the case with the file, REPORT.DOC.

Do you put REPORT.DOC in the REPORT directory with other *report* files, or do you put it in the WP directory with other .DOC files (the WP directory will be created in Practice Exercise 52)?

You will be directed to put REPORT.DOC in the WP directory with other .DOC files in Practice Exercise 52.

DIR NOTE: When you use the filename pattern REPORT? with the DIR command, it lists REPORT.DOC along with REPORT1, REPORT2, and REPORT3.

However, when you use that same filename pattern (REPORT?) with the COPY and DEL commands, those commands will not copy or delete the REPORT.DOC file.

If you use the filename pattern REPORT?. (add a period) with the DIR command, it will not list REPORT.DOC with the other REPORT files.

Either filename pattern (REPORT?. or REPORT?) can be used to copy and delete REPORT1, REPORT2, and REPORT3.

❺ Transfer report files (except REPORT.DOC) from DATA directory to REPORTS directory:

(the *report* files either end with .RPT or begin with REPORT, but do not include REPORT.DOC – see WARNING in step 4)

This prompt should still be displayed: A:\PROGRAMS\DATA>

- Use concepts covered in steps 3 and 4 to transfer the "report" files (except REPORT.DOC) from the DATA directory to the REPORTS directory. See DIR note in side column. (Solution in Appendix E.)

❻ Copy files to a new directory:

(copy files that begin with C from GAMES to TEMP)

- **Change** to the *root* directory.

```
A:\>
```

- **Type** COPY \GAMES\C*.* \TEMP ↵

```
GAMES\CHESS.GAM
GAMES\CLUE.GAM
        2 file(s) copied
```

- **Type** DIR \TEMP ↵

```
 Directory of A:\TEMP

.            <DIR>      XX-XX-XX   X:XXX
..           <DIR>      XX-XX-XX   X:XXX
CHESS    GAM            9 05-02-93   8:48p
CLUE     GAM            8 05-02-93   8:17p
        4 file(s)          17 bytes
                       XXXXXX bytes free
```

❼ Create a new directory:

(make a directory named MISC that is a subdirectory of the root directory)

- **Make** a directory; name it MISC (review, Exercise 45).
- **Display** the new directory structure (review, step 2).

```
A:.
├───GAMES
├───FOOD
│   ├───VEGGIES
│   └───GOODIES
├───PROGRAMS
│   └───DATA
│       ├───LETTERS
│       ├───MEMOS
│       └───REPORTS
├───TEMP
├───BAK
├───NEWDIR
└───MISC    ← subdirectory of the root directory
```

❽ Transfer files into the new directory:

- **Change** to the DATA directory.

```
A:\PROGRAMS\DATA>
```

- **List** the file in the *current* directory (DATA).
  DOS lists three directories and twelve files (including HELLO, HURRAH, and NOT).

DOS 6 only

- **Type** MOVE HELLO \MISC ↵

DOS 5 only

- **Type** COPY HELLO \MISC ↵
- **Type** DIR \MISC ↵ (HELLO should be listed).
- **Type** DEL HELLO ↵

DOS 6 *and* DOS 5

- **Transfer** the files HURRAH and NOT from DATA to MISC.
  NOTE: Since you are transferring files to a different directory branch, you must type the full path (\MISC). (Solution in Appendix E.)
- **Change** to the MISC directory.

```
A:\MISC>
```

Exercise 46 continued...

DOS 6 and DOS 5: (continued)

- **List** the contents of the directory.

```
 Directory of A:\MISC

.            <DIR>      XX-XX-XX   X:XXX
..           <DIR>      XX-XX-XX   X:XXX
HELLO                99 05-25-93   9:36p
HURRAH               54 05-02-93   8:40p
NOT                  60 05-25-93   9:37p
       5 file(s)          213 bytes
                       XXXXXX bytes free
```

- **Change** to the *root* directory.

```
A:\>
```

9 Print a list showing all files on the disk:

This prompt should be displayed: A:\>

- **Type** `DIR /S>PRN` ↵
  The first page or two are ejected.
- **Force** the printer to eject the remaining page.

Page breaks will vary.

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
Directory of A:\

GAMES        <DIR>      05-02-93   7:46p
FOOD         <DIR>      05-02-93   7:46p
PROGRAMS     <DIR>      05-22-93   8:41p
TEMP         <DIR>      XX-XX-XX   X:XXX
BAK          <DIR>      05-22-93   8:43p
NEWDIR       <DIR>      XX-XX-XX   X:XXX
MISC         <DIR>      XX-XX-XX   X:XXX
       7 file(s)              0 bytes
Directory of A:\BAK

.            <DIR>      05-22-93   8:43p
..           <DIR>      05-22-93   8:43p
       2 file(s)              0 bytes
Directory of A:\FOOD

.            <DIR>      05-02-93   7:46p
..           <DIR>      05-02-93   7:46p
VEGGIES      <DIR>      05-02-93   8:27p
GOODIES      <DIR>      05-02-93   8:28p
       4 file(s)              0 bytes
Directory of A:\FOOD\GOODIES

.            <DIR>      05-02-93   8:28p
..           <DIR>      05-02-93   8:28p
CAKE     DES          8 05-02-93   8:45p
COOKIES  DES         11 05-02-93   8:46p
ICECREAM DES         12 05-02-93   8:46p
PIE      DES          7 05-02-93   8:46p
PUDDING  DES         11 05-02-93   8:19p
JELLO    DES          9 05-02-93   8:23p
       8 file(s)             58 bytes
Directory of A:\FOOD\VEGGIES

.            <DIR>      05-02-93   8:27p
..           <DIR>      05-02-93   8:27p
CABBAGE  VEG         11 05-02-93   8:47p
CARROTS  VEG         11 05-02-93   8:47p
KALE     VEG          8 05-02-93   8:47p
LETTUCE  VEG         11 05-02-93   8:47p
CELERY   VEG         10 05-02-93   8:48p
CORN     VEG          8 05-02-93   8:17p
RADISH   VEG         10 05-02-93   8:17p
POTATOES VEG         12 05-02-93   8:18p
      10 file(s)             81 bytes
Directory of A:\GAMES

.            <DIR>      05-02-93   7:46p
..           <DIR>      05-02-93   7:46p
ASTRO    GAM          9 05-02-93   8:48p
CHESS    GAM          9 05-02-93   8:48p
JEOPARDY GAM         12 05-02-93   8:49p
CLUE     GAM          8 05-02-93   8:17p
TRIVIA   GAM         10 05-02-93   8:21p
OLDMAID  GAM         11 05-02-93   8:23p
       8 file(s)              59 bytes
Directory of A:\MISC

.            <DIR>      XX-XX-XX   X:XXX
..           <DIR>      XX-XX-XX   X:XXX
HELLO                99 05-25-93   9:36p
HURRAH               54 05-02-93   8:40p
NOT                  60 05-25-93   9:37p
       5 file(s)          213 bytes
Directory of A:\NEWDIR

.            <DIR>      XX-XX-XX   X:XXX
..           <DIR>      XX-XX-XX   X:XXX
       2 file(s)              0 bytes
```

```
Directory of A:\PROGRAMS

.            <DIR>      05-22-93   8:41p
..           <DIR>      05-22-93   8:41p
CLS      DAT            290 04-22-93   4:05p
OPENING  DAT            319 04-22-93   4:05p
CD       DAT            479 04-22-93   3:57p
SHOWME   BAT            139 04-22-93   3:59p
DB       EXE          31458 04-22-93   3:21p
SS       EXE          31374 04-22-93   3:06p
WP       EXE          31426 04-22-93   3:10p
DATA         <DIR>      05-22-93   8:43p
      10 file(s)         95485 bytes
Directory of A:\PROGRAMS\DATA

.            <DIR>      05-22-93   8:43p
..           <DIR>      05-22-93   8:43p
MEMBER   DB             9 05-25-93   9:28p
CLUB     DB             7 05-25-93   9:29p
MUSIC    DB             8 05-25-93   9:29p
REPORT   DOC           10 05-25-93   9:30p
SCRIPT   DOC           10 05-25-93   9:30p
PAYROLL  WK            10 05-25-93   9:31p
SALES    WK             8 05-25-93   9:31p
AGENDA   DOC           10 05-25-93   9:32p
GRADES   WK             9 05-25-93   9:32p
LETTERS      <DIR>      XX-XX-XX   X:XXX
MEMOS        <DIR>      XX-XX-XX   X:XXX
REPORTS      <DIR>      XX-XX-XX   X:XXX
      14 file(s)             81 bytes
Directory of A:\PROGRAMS\DATA\LETTERS

.            <DIR>      XX-XX-XX   X:XXX
..           <DIR>      XX-XX-XX   X:XXX
JONES    LET            9 05-02-93   7:48p
SMITH    LET            9 05-02-93   8:13p
LOPEZ    LET            9 05-02-93   8:13p
LETTER1                 7 05-02-93   8:15p
LETTER2                 7 05-02-93   8:16p
LETTER3                 7 05-02-93   8:22p
       8 file(s)              48 bytes
Directory of A:\PROGRAMS\DATA\MEMOS

.            <DIR>      XX-XX-XX   X:XXX
..           <DIR>      XX-XX-XX   X:XXX
SMITH    MEM            9 05-02-93   8:20p
LOPEZ    MEM            9 05-02-93   8:21p
JONES    MEM            9 05-02-93   8:22p
MEMO3                   5 05-02-93   8:21p
MEMO1                   5 05-02-93   8:24p
MEMO2                   5 05-02-93   8:24p
       8 file(s)              42 bytes
Directory of A:\PROGRAMS\DATA\REPORTS

.            <DIR>      XX-XX-XX   X:XXX
..           <DIR>      XX-XX-XX   X:XXX
LOPEZ    RPT            9 05-02-93   8:19p
SMITH    RPT            9 05-02-93   8:20p
JONES    RPT            9 05-02-93   8:23p
REPORT3                 7 05-02-93   8:16p
REPORT1                 7 05-02-93   8:20p
REPORT2                 7 05-02-93   8:25p
       8 file(s)              48 bytes
Directory of A:\TEMP

.            <DIR>      XX-XX-XX   X:XXX
..           <DIR>      XX-XX-XX   X:XXX
CHESS    GAM            9 05-02-93   8:48p
CLUE     GAM            8 05-02-93   8:17p
       4 file(s)              17 bytes
Total files listed:
      98 file(s)          96132 bytes
                       XXXXXX bytes free
```

10

- **Go on** to Exercise 47
  or **take** the disk out of drive A: and turn the computer off.

EXERCISE 47
RD (remove directory)

Deletes a directory.

OBJECTIVES:

- identify two conditions under which RD will not work
- remove the NEWDIR directory
- remove the TEMP directory
- make a directory, examine it, and delete it

– Terms and Notes –

NOTE: RD is an abbreviation of the DOS command RMDIR, which works just like RD.

STEPS to

Remove a directory

1 Change to the directory you want to delete.
2 List the contents of the directory.
3 Delete any files and/or directories in the directory (if there are any files in it).
4 Change to the parent directory of the directory to be removed.
5 Type RD
6 Press Space
7 Type the directory's name.
8 Press ↵

Deleting directories

Two conditions must be met before you can use the RD command to delete a directory:

- the directory must be empty, and
- the directory cannot be current.

1 • If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 • **List** the contents of the current directory.

```
 Directory of A:\
GAMES          <DIR>      05-02-93   7:46p
FOOD           <DIR>      05-02-93   7:46p
PROGRAMS       <DIR>      05-22-93   8:41p
TEMP           <DIR>      XX-XX-XX   X:XXX
BAK            <DIR>      05-22-93   8:43p
NEWDIR         <DIR>      XX-XX-XX   X:XXX
MISC           <DIR>      XX-XX-XX   X:XXX
        7 file(s)              0 bytes
                           XXXXXX bytes free
```

3 **Try to remove a directory when the directory is current:**

- **Change** to the NEWDIR directory.

```
A:\NEWDIR>
```

- **List** the contents of the NEWDIR directory.

```
 Directory of A:\NEWDIR
.              <DIR>      XX-XX-XX   X:XXX
..             <DIR>      XX-XX-XX   X:XXX
        2 file(s)              0 bytes
                           XXXXXX bytes free
```

- **Type** RD \NEWDIR ↵
  DOS displays the following message and does not remove the directory.

```
Attempt to remove current directory - \NEWDIR
```

*IMPORTANT: You cannot **remove** a directory when it is current, that is, when you are **in** the directory you want to remove.*

4 **Remove the NEWDIR directory:**

- **Change** to the root directory.

```
A:\>
```

- **Type** RD \NEWDIR ↵
  DOS removes the directory and displays a new prompt, but does not report success.

```
A:\>
```

- **List** the contents of the current directory.
  *Since the NEWDIR directory was deleted, it is **not** displayed.*

```
 Directory of A:\
GAMES          <DIR>      05-02-93   7:46p
FOOD           <DIR>      05-02-93   7:46p
PROGRAMS       <DIR>      05-22-93   8:41p
TEMP           <DIR>      XX-XX-XX   X:XXX
BAK            <DIR>      05-22-93   8:43p
MISC           <DIR>      XX-XX-XX   X:XXX
        6 file(s)              0 bytes
                           XXXXXX bytes free
```

Exercise 47 continued...

❺ Remove the TEMP directory:

- **Type** RD \TEMP ↵

```
Invalid path, not directory,
or directory not empty
```

*IMPORTANT: The RD command cannot **remove** a directory unless it is **empty**.*

- **Change** to the TEMP directory.

```
A:\TEMP>
```

- **List** the contents of the TEMP directory.

```
 Directory of A:\TEMP

.            <DIR>      XX-XX-XX   X:XXX
..           <DIR>      XX-XX-XX   X:XXX
CHESS    GAM            9 05-02-93   8:48p
CLUE     GAM            8 05-02-93   8:17p
       4 file(s)             17 bytes
                      XXXXXX bytes free
```

- **Type** DEL *.* ↵

```
All files in directory will be deleted!
Are you sure (Y/N)?
```

- **Type** Y ↵

```
A:\TEMP>
```

- **List** the contents of the TEMP directory.
  The directory is empty.

```
 Directory of A:\TEMP

.            <DIR>      XX-XX-XX   X:XXX
..           <DIR>      XX-XX-XX   X:XXX
       2 file(s)              0 bytes
                      XXXXXX bytes free
```

- **Change** to the root directory (the parent of TEMP).

```
A:\>
```

- **List** the contents of the current directory.

```
 Directory of A:\

GAMES        <DIR>      05-02-93   7:46p
FOOD         <DIR>      05-02-93   7:46p
PROGRAMS     <DIR>      05-22-93   8:41p
TEMP         <DIR>      XX-XX-XX   X:XXX
BAK          <DIR>      05-22-93   8:43p
MISC         <DIR>      XX-XX-XX   X:XXX
       6 file(s)              0 bytes
                      XXXXXX bytes free
```

- **Type** RD \TEMP ↵
  DOS removes the directory and displays a new prompt, but does not report success.
- **List** the contents of the current directory.
  The TEMP directory does not appear.

```
 Directory of A:\

GAMES        <DIR>      05-02-93   7:46p
FOOD         <DIR>      05-02-93   7:46p
PROGRAMS     <DIR>      05-22-93   8:41p
BAK          <DIR>      05-22-93   8:43p
MISC         <DIR>      XX-XX-XX   X:XXX
       5 file(s)              0 bytes
                      XXXXXX bytes free
```

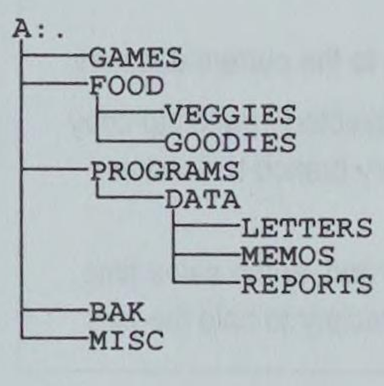
❻ Make a directory, examine it, and remove it:

- **Make a directory**; name it **FUN** (review, Exercise 45).
- **List** the contents of the root directory; notice the FUN directory.
- **Change** to the FUN directory.
- **List** the contents of the FUN directory.
- **Change** to the root directory.
- **Remove** the FUN directory (RD FUN).
- **List** the contents of the root directory; the FUN directory is gone.

❼

- **Go on** to Exercise 48
  or **take** the disk out of drive A: and turn the computer off.

Directory structure at the end of Exercise 47



EXERCISE 48
XCOPY

Copies all the files (except hidden and system files) in a directory or in an entire directory branch.

OBJECTIVES:

- identify the use of the /S (subdirectory) switch and the /E (empty directory) switch
- copy all the files in a directory to another directory
- copy a directory to the current directory
- use the /S (subdirectory) switch to copy an entire directory branch to another directory
- copy a directory and, at the same time, create a new directory to hold the files

– Terms and Notes –

IMPORTANT: XCOPY is an **external command**. If you get a **Bad command or file name** message, C:\DOS is not in the PATH command of your AUTOEXEC.BAT file.

NOTE: A common use of the XCOPY command is to *back up* files and directories on one disk to another disk. When you use this method to "reproduce" a disk, the disks do not need to be identical in size and density (as they do when you use the DISKCOPY command).

To copy files to a different disk, simply put the desired drive letter in the *source* and *destination parameters*.

For example, to back up the disk in drive A: to the disk in drive B:, type:

```
XCOPY A: B: /S/E
```

This book does not instruct you to use XCOPY to copy files to a different disk drive because this book does not know what disks drives your system has and does not want to instruct you to put files on the hard disk.

Using XCOPY

XCOPY is similar to COPY, but instead of copying a *file* or *group of files*, XCOPY copies the contents of a *directory* or *directory branch*. You use XCOPY to copy a *directory* to a different directory and/or a different drive.

Because you need to define the location of the files you want to copy, you must use a *source parameter* with the XCOPY command. It is common to also use a *destination parameter* in the XCOPY command to specify the *destination* of the files you want to copy. For example:

```
XCOPY   \GAMES   \TEMP
  ↑       ↑       ↑
command  source  destination
 name   parameter parameter
```

If you omit the *destination*, DOS copies the files to the *current* directory.

To copy all the directories and their files in a directory branch, you must use the /S (subdirectory) switch. For example, XCOPY PROGRAM\DATA BAK /S copies all the files in the DATA directory *plus* the LETTERS, MEMOS, and REPORTS directories and all of their files to the BAK directory.

An *empty directory* has no files in it. To reproduce (copy) directories that are *empty*, you must add the /E (empty directory) switch to the /S switch.

Because the XCOPY command often copies large numbers of files, errors can be significant. It is wise to use the *entire* source and destination paths in your command. Using the entire path forces you to think about *exactly* what you are doing, so you are less likely to make errors.

1 • If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 **Make a directory and display the directory tree:**

- **Make** a directory; name it TEMP (review, Exercise 45).
- **Display** the directory tree (review, Exercise 13).

```
A:.
├─GAMES
├─FOOD
│  ├─VEGGIES
│  └─GOODIES
├─PROGRAMS
│  └─DATA
│      ├─LETTERS
│      ├─MEMOS
│      └─REPORTS
├─TEMP
├─BAK
└─MISC
```

3 **Copy all the files in a directory to another directory:**
(copy files in GAMES to the TEMP directory)

- **Type** `XCOPY \GAMES \TEMP` ↵

```
Reading source file(s)...
GAMES\ASTRO.GAM
GAMES\CHESS.GAM
GAMES\JEOPARDY.GAM
GAMES\CLUE.GAM
GAMES\TRIVIA.GAM
GAMES\OLDMAID.GAM
       6 File(s) copied
```

- **Type** `DIR TEMP` ↵

```
 Directory of A:\TEMP

.            <DIR>      XX-XX-XX   X:XXX
..           <DIR>      XX-XX-XX   X:XXX
ASTRO    GAM             9 05-02-93   8:48p
CHESS    GAM             9 05-02-93   8:48p
JEOPARDY GAM            12 05-02-93   8:49p
CLUE     GAM             8 05-02-93   8:17p
TRIVIA   GAM            10 05-02-93   8:21p
OLDMAID  GAM            11 05-02-93   8:23p
       8 file(s)              59 bytes
                       XXXXXX bytes free
```

Exercise 48 continued...

❹ Copy the contents of a directory to the current directory:

(copy all the files in MISC to the BAK directory)

- **List** the contents of the MISC directory.

```
 Directory of A:\MISC

.             <DIR>      XX-XX-XX   X:XXX
..            <DIR>      XX-XX-XX   X:XXX
HELLO                99 05-25-93    9:36p
HURRAH               54 05-02-93    8:40p
NOT                  60 05-25-93    9:37p
        5 file(s)          213 bytes
                       192512 bytes free
```

- **Change** to the BAK directory.

```
A:\BAK>
```

- **List** the contents of the current (BAK) directory.

```
 Directory of A:\BAK

.             <DIR>      05-22-93    8:43p
..            <DIR>      05-22-93    8:43p
        2 file(s)              0 bytes
                          XXXXXX bytes free
```

- **Type** `XCOPY \MISC` ↵ (DOS *needs* the full path here).

```
Reading source file(s)...
\MISC\HELLO
\MISC\HURRAH
\MISC\NOT
        3 File(s) copied
```

- **List** the contents of the current (BAK) directory.

```
 Directory of A:\BAK

.             <DIR>      05-22-93    8:43p
..            <DIR>      05-22-93    8:43p
HELLO                99 05-25-93    9:36p
HURRAH               54 05-02-93    8:40p
NOT                  60 05-25-93    9:37p
        5 file(s)          213 bytes
                          XXXXXX bytes free
```

- **Change** to the *root* directory.

```
A:\>
```

❺ Copy an entire directory branch to another directory:

(copy the DATA directory branch to the BAK directory)

To copy all the files and directories in a directory branch, you must use the /S switch.

- **List** the files in the BAK directory from the current directory.
  DOS displays the three files you just copied to the BAK directory.
- **List** the current directory.
  DOS displays the six directories in the root directory.
- **Type** `XCOPY \PROGRAMS\DATA \BAK /S` ↵

```
Reading source file(s)...
PROGRAMS\DATA\MEMBER.DB
PROGRAMS\DATA\CLUB.DB
PROGRAMS\DATA\MUSIC.DB
PROGRAMS\DATA\REPORT.DOC
PROGRAMS\DATA\SCRIPT.DOC
PROGRAMS\DATA\PAYROLL.WK
PROGRAMS\DATA\SALES.WK
PROGRAMS\DATA\AGENDA.DOC
PROGRAMS\DATA\GRADES.WK
PROGRAMS\DATA\LETTERS\JONES.LET
PROGRAMS\DATA\LETTERS\SMITH.LET
PROGRAMS\DATA\LETTERS\LOPEZ.LET
PROGRAMS\DATA\LETTERS\LETTER1
PROGRAMS\DATA\LETTERS\LETTER2
PROGRAMS\DATA\LETTERS\LETTER3
PROGRAMS\DATA\MEMOS\SMITH.MEM
PROGRAMS\DATA\MEMOS\LOPEZ.MEM
PROGRAMS\DATA\MEMOS\JONES.MEM
PROGRAMS\DATA\MEMOS\MEMO3
PROGRAMS\DATA\MEMOS\MEMO1
PROGRAMS\DATA\MEMOS\MEMO2
PROGRAMS\DATA\REPORTS\LOPEZ.RPT
PROGRAMS\DATA\REPORTS\SMITH.RPT
PROGRAMS\DATA\REPORTS\JONES.RPT
PROGRAMS\DATA\REPORTS\REPORT3
PROGRAMS\DATA\REPORTS\REPORT1
PROGRAMS\DATA\REPORTS\REPORT2
       27 File(s) copied
```

Exercise 48 continued...

STEPS to

Copy one directory to another directory

1 Type XCOPY
2 Press Space
3 Type the directory you want to copy files from (including the path to it).
4 Press Space
5 Type the directory you want to copy files to (including the path to it).
6 Press ↵

Copy one directory to the current directory

1 Change to the directory to receive the files.
2 Type XCOPY
3 Press Space
4 Type the directory you want to copy files from (including the path to it).
5 Press ↵

Copy a directory branch to another directory

1 Type XCOPY
2 Press Space
3 Type the directory you want to copy files and subdirectories from (including the path to it).
4 Press Space
5 Type the directory you want to copy files to (including the path to it).
6 Press Space
7 Type /S
8 Press ↵

- **List** the files in the BAK directory.
  The three files that you copied in step 4 plus the files and directories that you copied in this step are displayed.

```
 Directory of A:\BAK

.            <DIR>      05-22-93   8:43p
..           <DIR>      05-22-93   8:43p
HELLO                99 05-25-93   9:36p
HURRAH               54 05-02-93   8:40p
NOT                  60 05-25-93   9:37p
MEMBER   DB           9 05-25-93   9:28p
CLUB     DB           7 05-25-93   9:29p
MUSIC    DB           8 05-25-93   9:29p
REPORT   DOC         10 05-25-93   9:30p
SCRIPT   DOC         10 05-25-93   9:30p
PAYROLL  WK          10 05-25-93   9:31p
SALES    WK           8 05-25-93   9:31p
AGENDA   DOC         10 05-25-93   9:32p
GRADES   WK           9 05-25-93   9:32p
LETTERS      <DIR>      XX-XX-XX   X:XXX
MEMOS        <DIR>      XX-XX-XX   X:XXX
REPORTS      <DIR>      XX-XX-XX   X:XXX
      17 file(s)          294 bytes
                       XXXXXX bytes free
```

- **Type** `DIR BAK\LETTERS` ↵
  (to list the contents of the *new* LETTERS directory).

```
 Directory of A:\BAK\LETTERS

.            <DIR>      XX-XX-XX   X:XXX
..           <DIR>      XX-XX-XX   X:XXX
JONES    LET           9 05-02-93   7:48p
SMITH    LET           9 05-02-93   8:13p
LOPEZ    LET           9 05-02-93   8:13p
LETTER1                7 05-02-93   8:15p
LETTER2                7 05-02-93   8:16p
LETTER3                7 05-02-93   8:22p
       8 file(s)           48 bytes
                       XXXXXX bytes free
```

- **List** the contents of the *new* MEMOS directory.

```
 Directory of A:\BAK\MEMOS

.            <DIR>      XX-XX-XX   X:XXX
..           <DIR>      XX-XX-XX   X:XXX
SMITH    MEM           9 05-02-93   8:20p
LOPEZ    MEM           9 05-02-93   8:21p
JONES    MEM           9 05-02-93   8:22p
MEMO3                  5 05-02-93   8:21p
MEMO1                  5 05-02-93   8:24p
MEMO2                  5 05-02-93   8:24p
       8 file(s)           42 bytes
                       XXXXXX bytes free
```

- **List** the contents of the *new* REPORTS directory.

```
 Directory of A:\BAK\REPORTS

.            <DIR>      XX-XX-XX   X:XXX
..           <DIR>      XX-XX-XX   X:XXX
LOPEZ    RPT           9 05-02-93   8:19p
SMITH    RPT           9 05-02-93   8:20p
JONES    RPT           9 05-02-93   8:23p
REPORT3                7 05-02-93   8:16p
REPORT1                7 05-02-93   8:20p
REPORT2                7 05-02-93   8:25p
       8 file(s)           48 bytes
                       XXXXXX bytes free
```

- **Clear** the screen.

```
A:\>
```

- **List** the contents of the *current* (root) directory.

```
 Directory of A:\

GAMES        <DIR>      05-02-93   7:46p
FOOD         <DIR>      05-02-93   7:46p
PROGRAMS     <DIR>      05-22-93   8:41p
TEMP         <DIR>      XX-XX-XX   X:XXX
BAK          <DIR>      05-22-93   8:43p
MISC         <DIR>      XX-XX-XX   X:XXX
       6 file(s)            0 bytes
                       XXXXXX bytes free
```

Exercise 48 continued...

6 Copy a directory and create a new directory to hold the files:

(copy GOODIES to a new directory named DESSERT)

- **Type** XCOPY \FOOD\GOODIES \DESSERT ↵

*DOS wants to know if you are copying the files to a **single file** or to a **directory**.*

```
Does DESSERT specify a file name
or directory name on the target
(F = file, D = directory)?
```

- **Type** D

```
Reading source file(s)...
FOOD\GOODIES\CAKE.DES
FOOD\GOODIES\COOKIES.DES
FOOD\GOODIES\ICECREAM.DES
FOOD\GOODIES\PIE.DES
FOOD\GOODIES\PUDDING.DES
FOOD\GOODIES\JELLO.DES
        6 File(s) copied
```

- **Type** DIR DESSERT ↵ (to list files in DESSERT directory).

```
 Directory of A:\DESSERT

.            <DIR>      XX-XX-XX  1X:XXX
..           <DIR>      XX-XX-XX  1X:XXX
CAKE     DES            8 05-02-93   8:45p
COOKIES  DES           11 05-02-93   8:46p
ICECREAM DES           12 05-02-93   8:46p
PIE      DES            7 05-02-93   8:46p
PUDDING  DES           11 05-02-93   8:19p
JELLO    DES            9 05-02-93   8:23p
        8 file(s)             58 bytes
                       XXXXXX bytes free
```

- **List** the files in the *current* (root) directory.

```
 Directory of A:\

GAMES        <DIR>      05-02-93   7:46p
FOOD         <DIR>      05-02-93   7:46p
PROGRAMS     <DIR>      05-22-93   8:41p
TEMP         <DIR>      XX-XX-XX   X:XXX
BAK          <DIR>      05-22-93   8:43p
DESSERT      <DIR>      XX-XX-XX   X:XXX
MISC         <DIR>      XX-XX-XX   X:XXX
        7 file(s)              0 bytes
                       XXXXXX bytes free
```

7 Display and print the directory structure:

- **Type** TREE ↵

```
A:.
├─GAMES
├─FOOD
│  ├─VEGGIES
│  └─GOODIES
├─PROGRAMS
│  └─DATA
│     ├─LETTERS
│     ├─MEMOS
│     └─REPORTS
├─TEMP
├─BAK
│  ├─LETTERS
│  ├─MEMOS
│  └─REPORTS
├─DESSERT
└─MISC
```

- **Make sure** the printer is ready to receive data.
- **Type** TREE>PRN ↵
- **Force** the printer to eject the paper.

The result should match the one above; however, your printer may print characters instead of lines (your printer manual may have instructions about how to change to a "graphics" mode that will print lines).

8 DOS 6 only

- **Go on** to Exercise 49
  or **take** the disk out of drive A: and turn the computer off.

DOS 5 only

- **Skip** Exercise 49 and **Go on** to Exercise 50
  or **take** the disk out of drive A: and turn the computer off.

EXERCISE 49

DOS 6 only

DELTREE (delete tree)

Deletes a directory and all the files and subdirectories within it.

OBJECTIVES:

- delete a directory and its files
- delete files and subdirectories in a directory without deleting the directory itself
- delete an entire directory branch

STEPS to

Delete a directory and everything in the directory

1 Change to a directory level above the directory you want to delete.
2 Type DELTREE
3 Press Space
4 Type the directory you want to delete, including the path to the directory, if necessary.
5 Press ↵
DOS asks for confirmation.
6 Type Y ↵

Delete everything in a directory, but not the directory itself

1 Change to the directory whose contents you want to delete.
2 Type DELTREE
3 Press Space
4 Type the directory you want to delete, starting with the path from the root directory.
5 Press ↵
DOS asks for confirmation.
6 Type Y ↵

DOS 5 users skip Exercise 49

Using DELTREE

Use the DELTREE command with caution. Deleting an entire directory and all of its subdirectories (a directory branch) can cause you to lose important files. On the other hand, not being able to delete an entire directory or directory branch can result in tedious, time-consuming work when you want to remove more than just a few directories and their files.

When you use DELTREE, you must tell DOS what directory to delete. For example, to delete the BAK directory branch, type: DELTREE \BAK ↵

1

- If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: A:\>

2 **Delete a directory:**
(delete the DESSERT directory)

- **Display** the directory tree.

```
A:.
├──GAMES
├──FOOD
│   ├──VEGGIES
│   └──GOODIES
├──PROGRAMS
│   └──DATA
│       ├──LETTERS
│       ├──MEMOS
│       └──REPORTS
├──TEMP
├──BAK
│       ├──LETTERS
│       ├──MEMOS
│       └──REPORTS
├──DESSERT ← subdirectory of the root directory
└──MISC
```

- **List** the contents of the DESSERT directory.

```
 Directory of A:\DESSERT

.            <DIR>      XX-XX-XX  1X:XXX
..           <DIR>      XX-XX-XX  1X:XXX
CAKE     DES            8 05-02-93   8:45p
COOKIES  DES           11 05-02-93   8:46p
ICECREAM DES           12 05-02-93   8:46p
PIE      DES            7 05-02-93   8:46p
PUDDING  DES           11 05-02-93   8:19p
JELLO    DES            9 05-02-93   8:23p
        8 file(s)             58 bytes
                       XXXXXX bytes free
```

- **Type** DELTREE \DESSERT ↵

*IMPORTANT: DELTREE is an **external command**. If you get a **Bad command or file name** message, C:\DOS is not in the PATH command of your AUTOEXEC.BAT file. You can probably complete this exercise if you **type** PATH C:\DOS ↵ and repeat step 2 (see Exercise 66, page 168).*

Since the consequences of this command are serious, DOS asks for confirmation.

```
Delete directory "\dessert" and all its subdirectories? [yn]
```

- **Type** Y ↵

```
Deleting \dessert...
```

- **List** the contents of the *current* (root) directory.
The DESSERT directory is gone.

```
 Directory of A:\

GAMES          <DIR>      05-02-93   7:46p
FOOD           <DIR>      05-02-93   7:46p
PROGRAMS       <DIR>      05-22-93   8:41p
TEMP           <DIR>      XX-XX-XX   X:XXX
BAK            <DIR>      05-22-93   8:43p
MISC           <DIR>      XX-XX-XX   X:XXX
        6 file(s)              0 bytes
                       XXXXXX bytes free
```

Exercise 49 continued...

NOTE: In step 3, if there had been subdirectories in the TEMP directory, they would have been deleted also.

❸ Delete the entire contents of a directory, but not the directory:

(delete files in the TEMP directory)

To delete the entire contents of a directory without deleting the directory itself, you must make that directory the *current directory* (from which you issue the DELTREE command).

- **Change** to the TEMP directory.

```
A:\TEMP>
```

- **Type** `DELTREE \TEMP` ↵ (DOS needs full path here).

```
Delete directory "\temp" and all its subdirectories? [yn]
```

- **Type** `Y` ↵

```
Deleting \temp...
```

- **List** the root directory (DIR\).

*Because the TEMP directory was **current**, the TEMP directory was not deleted, just the **contents** of the TEMP directory were deleted.*

```
 Directory of A:\
GAMES          <DIR>      05-02-93   7:46p
FOOD           <DIR>      05-02-93   7:46p
PROGRAMS       <DIR>      05-22-93   8:41p
TEMP           <DIR>      XX-XX-XX   X:XXX
BAK            <DIR>      05-22-93   8:43p
MISC           <DIR>      XX-XX-XX   X:XXX
        6 file(s)              0 bytes
                          XXXXXX bytes free
```

- **List** the contents of the *current* (TEMP) directory.

```
 Directory of A:\TEMP
.              <DIR>      XX-XX-XX   X:XXX
..             <DIR>      XX-XX-XX   X:XXX
        2 file(s)              0 bytes
                          XXXXXX bytes free
```

- **Change** to the root directory.

```
A:\>
```

❹ Delete a directory and its subdirectories:

(delete the BAK directory branch)

- **Type** `DIR BAK` ↵

DOS displays the contents of the BAK directory... 17 files (including the directories).

- **Type** `DELTREE \BAK` ↵

DOS asks for confirmation.

- **Type** `Y` ↵

DOS displays a message that it is "Deleting \bak..."

- **List** the contents of the *current* (root) directory.

```
 Directory of A:\
GAMES          <DIR>      05-02-93   7:46p
FOOD           <DIR>      05-02-93   7:46p
PROGRAMS       <DIR>      05-22-93   8:41p
TEMP           <DIR>      XX-XX-XX   X:XXX
MISC           <DIR>      XX-XX-XX   X:XXX
        5 file(s)              0 bytes
                          XXXXXX bytes free
```

- **Display** the directory structure.

```
A:.
├─GAMES
├─FOOD
│  ├─VEGGIES
│  └─GOODIES
├─PROGRAMS
│  └─DATA
│      ├─LETTERS
│      ├─MEMOS
│      └─REPORTS
├─TEMP
└─MISC
```

❺

- **Skip** Exercise 50 and **go on** to Exercise 51
  or **take** the disk out of drive A: and turn the computer off.

EXERCISE 50

DOS 5 only

Delete directory

Delete a directory and all the files and subdirectories within it.

OBJECTIVES:

- delete a directory and its files
- delete the contents of a directory
- delete an entire directory branch by deleting each directory in the branch, one at a time

– Terms and Notes –

NOTE: This exercise (delete directory) was devised for DOS 5 users simply as a substitute for Exercise 49 (DELTREE), which is unavailable to DOS 5 users.

STEPS to

Delete a directory without subdirectories

1 Change to the directory you want to delete.
2 List the contents of the directory.
3 Delete all files in the directory of directory to remove.
4 Change to the parent directory.
5 Type RD
6 Press Space
7 Type the directory's name.
8 Press ↵

Delete a directory branch

1 Change to the lowest level directory in the directory branch you want to delete.
2 Perform steps 2 through 8 of the "steps to delete a directory without subdirectories" (above).
3 Repeat steps 1 and 2 above until all the desired directories are deleted.

DOS 6 users skip Exercise 50

Deleting directories using DOS 5

DOS 5 does not have the DELTREE command, which can easily delete a directory or an entire directory branch.

If you are using DOS 5, use the following steps to remove individual directories, one at a time:

- delete the files in the directory you want to delete, if there are files in it,
- change out of the directory, if you are in it, and
- use the RD command to remove the directory (see Exercise 47).

1 • If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2 Delete the DESSERT directory:

- **List** the contents of the *current* (root) directory; notice the DESSERT directory.
- **Change** to the DESSERT directory.
- **List** the contents of the *current* (DESSERT) directory.
- **Type** `DEL *.*` ↵
  (to delete *all* the files in the DESSERT directory).
  DOS warns you that "All files in directory will be deleted! Are you sure (Y/N)?"
- **Type** `Y` ↵
- **List** the contents of the *current* (DESSERT) directory; it should be empty.
- **Change** to the root directory.
- **Type** `RD DESSERT` ↵
- **List** the contents of the *current* (root) directory; the DESSERT directory is gone; notice the TEMP directory (you will work with it next).

3 Delete the contents of the TEMP directory:

- **Change** to the TEMP directory.
- **List** the contents of the *current* directory.
- **Delete** *all* the files in the TEMP directory.
- **List** the contents of the *current* directory; it should be empty.
- **Change** to the root directory.
- **List** the contents of the *current* directory; the TEMP directory is still there; notice the BAK directory (you will work with it next).

4 Delete all the files from the BAK directory branch:

- **Change** to the BAK directory.
- **List** the contents of the *current* directory.
- **Delete** *all* the files in the BAK directory.
- **List** the contents of the *current* directory again.
  The BAK directory still contains subdirectories.

```
 Directory of A:\BAK

.              <DIR>      06-22-93   10:43p
..             <DIR>      06-22-93   10:43p
LETTERS        <DIR>      XX-XX-XX    X:XXX
MEMOS          <DIR>      XX-XX-XX    X:XXX
REPORTS        <DIR>      XX-XX-XX    X:XXX
        5 file(s)              0 bytes
                           XXXXXX bytes free
```

NOTE: Each subdirectory of BAK must be emptied and then removed before the BAK directory can be deleted.

Exercise 50 continued...

5 Delete all the files from the LETTERS directory and remove it:

- **Change** to the LETTERS directory.
- **List** the contents of the *current* directory.
- **Delete** *all* of the files in the LETTERS directory.
- **List** the contents of the *current* directory; it should be empty.
- **Change** to the *parent* directory of LETTERS (\BAK).
- **Remove** the LETTERS directory (review, Exercise 47).

6 Delete all the files from the MEMOS directory and remove it:

- **Change** to the MEMOS directory.
- **List** the contents of the *current* directory.
- **Delete** *all* of the files in the MEMOS directory.
- **List** the contents of the *current* directory; it should be empty.
- **Change** to the *parent* directory of MEMOS (\BAK).
- **Remove** the MEMOS directory (review, Exercise 47).

7 Delete all the files from the REPORTS directory and remove it:

- **Change** to the REPORTS directory.
- **List** the contents of the *current* directory.
- **Delete** *all* of the files in the REPORTS directory.
- **List** the contents of the *current* directory; it should be empty.
- **Change** to the *parent* directory of REPORTS (\BAK).
- **Remove** the REPORTS directory (review, Exercise 47).

8 Delete the BAK directory:

- **List** the *current* directory; it should be empty.
- **Change** to the *parent* (root) directory.
- **Remove** the BAK directory (review, Exercise 47).
- **List** the contents of the *current* directory.

```
 Directory of A:\

GAMES          <DIR>      05-02-93   7:46p
FOOD           <DIR>      05-02-93   7:46p
PROGRAMS       <DIR>      05-22-93   8:41p
TEMP           <DIR>      XX-XX-XX   X:XXX
MISC           <DIR>      XX-XX-XX   X:XXX
        5 file(s)                0 bytes
                         XXXXXX bytes free
```

9 Display the directory structure:

- **Type** TREE ↵

```
A:.
├──GAMES
├──FOOD
│    ├──VEGGIES
│    └──GOODIES
├──PROGRAMS
│    └──DATA
│         ├──LETTERS
│         ├──MEMOS
│         └──REPORTS
├──TEMP
└──MISC
```

10 • **Go on** to Exercise 51
or **take** the disk out of drive A: and turn the computer off.

EXERCISE 51
Print contents of disk

Print all the directories and their files by issuing this command from the root directory: DIR/S>PRN

OBJECTIVE:

- print a list showing all the files on the DUPLICATE Learning Disk

1. • If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2. **Print a list showing all files on the DUPLICATE Learning Disk:**
   - **Make sure** the printer is ready to receive data.
   - **Type** `DIR /S>PRN` ↵
     The first page or two are ejected.
   - **Force** the printer to eject the remaining page.

Page breaks will vary.

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
Directory of A:\

GAMES          <DIR>      05-02-93   7:46p
FOOD           <DIR>      05-02-93   7:46p
PROGRAMS       <DIR>      05-22-93   8:41p
TEMP           <DIR>      XX-XX-XX   X:XXX
MISC           <DIR>      XX-XX-XX   X:XXX
       5 file(s)              0 bytes
Directory of A:\FOOD

.              <DIR>      05-02-93   7:46p
..             <DIR>      05-02-93   7:46p
VEGGIES        <DIR>      05-02-93   8:27p
GOODIES        <DIR>      05-02-93   8:28p
       4 file(s)              0 bytes
Directory of A:\FOOD\GOODIES

.              <DIR>      05-02-93   8:28p
..             <DIR>      05-02-93   8:28p
CAKE     DES         8 05-02-93   8:45p
COOKIES  DES        11 05-02-93   8:46p
ICECREAM DES        12 05-02-93   8:46p
PIE      DES         7 05-02-93   8:46p
PUDDING  DES        11 05-02-93   8:19p
JELLO    DES         9 05-02-93   8:23p
       8 file(s)             58 bytes
Directory of A:\FOOD\VEGGIES

.              <DIR>      05-02-93   8:27p
..             <DIR>      05-02-93   8:27p
CABBAGE  VEG        11 05-02-93   8:47p
CARROTS  VEG        11 05-02-93   8:47p
KALE     VEG         8 05-02-93   8:47p
LETTUCE  VEG        11 05-02-93   8:47p
CELERY   VEG        10 05-02-93   8:48p
CORN     VEG         8 05-02-93   8:17p
RADISH   VEG        10 05-02-93   8:17p
POTATOES VEG        12 05-02-93   8:18p
      10 file(s)             81 bytes
Directory of A:\GAMES

.              <DIR>      05-02-93   7:46p
..             <DIR>      05-02-93   7:46p
ASTRO    GAM         9 05-02-93   8:48p
CHESS    GAM         9 05-02-93   8:48p
JEOPARDY GAM        12 05-02-93   8:49p
CLUE     GAM         8 05-02-93   8:17p
TRIVIA   GAM        10 05-02-93   8:21p
OLDMAID  GAM        11 05-02-93   8:23p
       8 file(s)             59 bytes
Directory of A:\MISC

.              <DIR>      XX-XX-XX   X:XXX
..             <DIR>      XX-XX-XX   X:XXX
HELLO               99 05-25-93   9:36p
HURRAH              54 05-02-93   8:40p
NOT                 60 05-25-93   9:37p
       5 file(s)            213 bytes
```

```
Directory of A:\PROGRAMS

.              <DIR>      05-22-93   8:41p
..             <DIR>      05-22-93   8:41p
CLS      DAT         290 04-22-93   4:05p
OPENING  DAT         319 04-22-93   4:05p
CD       DAT         479 04-22-93   3:57p
SHOWME   BAT         139 04-22-93   3:59p
DB       EXE       31458 04-22-93   3:21p
SS       EXE       31374 04-22-93   3:06p
WP       EXE       31426 04-22-93   3:10p
DATA           <DIR>      05-22-93   8:43p
      10 file(s)         95485 bytes
Directory of A:\PROGRAMS\DATA

.              <DIR>      05-22-93   8:43p
..             <DIR>      05-22-93   8:43p
MEMBER   DB           9 05-25-93   9:28p
CLUB     DB           7 05-25-93   9:29p
MUSIC    DB           8 05-25-93   9:29p
REPORT   DOC         10 05-25-93   9:30p
SCRIPT   DOC         10 05-25-93   9:30p
PAYROLL  WK          10 05-25-93   9:31p
SALES    WK           8 05-25-93   9:31p
AGENDA   DOC         10 05-25-93   9:32p
GRADES   WK           9 05-25-93   9:32p
LETTERS        <DIR>      XX-XX-XX   X:XXX
MEMOS          <DIR>      XX-XX-XX   X:XXX
REPORTS        <DIR>      XX-XX-XX   X:XXX
      14 file(s)             81 bytes
Directory of A:\PROGRAMS\DATA\LETTERS

.              <DIR>      XX-XX-XX   X:XXX
..             <DIR>      XX-XX-XX   X:XXX
JONES    LET          9 05-02-93   7:48p
SMITH    LET          9 05-02-93   8:13p
LOPEZ    LET          9 05-02-93   8:13p
LETTER1               7 05-02-93   8:15p
LETTER2               7 05-02-93   8:16p
LETTER3               7 05-02-93   8:22p
       8 file(s)              48 bytes
Directory of A:\PROGRAMS\DATA\MEMOS

.              <DIR>      XX-XX-XX   X:XXX
..             <DIR>      XX-XX-XX   X:XXX
SMITH    MEM          9 05-02-93   8:20p
LOPEZ    MEM          9 05-02-93   8:21p
JONES    MEM          9 05-02-93   8:22p
MEMO3                 5 05-02-93   8:21p
MEMO1                 5 05-02-93   8:24p
MEMO2                 5 05-02-93   8:24p
       8 file(s)              42 bytes
Directory of A:\PROGRAMS\DATA\REPORTS

.              <DIR>      XX-XX-XX   X:XXX
..             <DIR>      XX-XX-XX   X:XXX
LOPEZ    RPT          9 05-02-93   8:19p
SMITH    RPT          9 05-02-93   8:20p
JONES    RPT          9 05-02-93   8:23p
REPORT3               7 05-02-93   8:16p
REPORT1               7 05-02-93   8:20p
REPORT2               7 05-02-93   8:25p
       8 file(s)              48 bytes
Directory of A:\TEMP

.              <DIR>      XX-XX-XX   X:XXX
..             <DIR>      XX-XX-XX   X:XXX
       2 file(s)               0 bytes
Total files listed:
      90 file(s)          96115 bytes
                        XXXXXX bytes free
```

3. • **Go on** to Exercise 52
   or **take** the disk out of drive A: and turn the computer off.

EXERCISE 52
Practice

LESSON FIVE
Organizing Files

OBJECTIVE:

- review the following tasks from the exercises in Lesson Five:

  MD (make directory)
  Transfer files to new directories
  RD (remove directory)
  XCOPY
  DELTREE (delete tree) (**DOS 6 only**)
  Delete directory (**DOS 5 only**)
  Print contents of disk

HINT:
The bolded term at the beginning of each exercise step gives a clue about the command that should be used to complete the step.
For example:

bolded term	command used
Copy	XCOPY
Transfer	MOVE (**DOS 6**)
Transfer	COPY and DEL (**DOS 5**)
Remove	RD
Delete	DELTREE (**DOS 6**)
Delete	delete files from the directory and RD(**DOS 5**)

directory structure at beginning of Exercise 52

```
A:.
├─GAMES
├─FOOD
│  ├─VEGGIES
│  └─GOODIES
├─PROGRAMS
│  └─DATA
│     ├─LETTERS
│     ├─MEMOS
│     └─REPORTS
├─TEMP
└─MISC
```

summary of files transferred in Exercise 52

files transferred	*from directory*	*to directory*
*.WK	DATA	SS
*.DB	DATA	DB
*.DOC	DATA	WP

The COMMANDS to perform the steps below are listed in Appendix F. Try to complete the Practice Exercise without looking in the Appendix for help.

Use the DIR command to list the contents of directories before and after performing the commands listed in each step (in a way that is useful to you). This will help you check your work and gain a sense of what is happening with the directories and their contents.

1. If necessary, **access** the DUPLICATE Learning Disk on drive A: and **change** to this common DOS prompt: `A:\>`

2. **Make** a directory; name it BAK.

3. **Make** a directory; name it TOYS.

4. **Make** a directory; name it NEW.

5. **Remove** the NEW directory.

6. **Change** to the DATA directory (a subdirectory of PROGRAMS).

7. **Make** a directory; name it SS.

8. **Make** a directory; name it DB.

9. **Make** a directory; name it WP.

10. **Change** to the root directory.

11. **Copy** the GAMES directory to the TOYS directory.

```
Reading source file(s)...
GAMES\ASTRO.GAM
GAMES\CHESS.GAM
GAMES\JEOPARDY.GAM
GAMES\CLUE.GAM
GAMES\TRIVIA.GAM
GAMES\OLDMAID.GAM
        6 File(s) copied
```

12. **Copy** the FOOD directory and its subdirectories to the BAK directory.

```
Reading source file(s)...
FOOD\VEGGIES\CABBAGE.VEG
FOOD\VEGGIES\CARROTS.VEG
FOOD\VEGGIES\KALE.VEG
FOOD\VEGGIES\LETTUCE.VEG
FOOD\VEGGIES\CELERY.VEG
FOOD\VEGGIES\CORN.VEG
FOOD\VEGGIES\RADISH.VEG
FOOD\VEGGIES\POTATOES.VEG
FOOD\GOODIES\CAKE.DES
FOOD\GOODIES\COOKIES.DES
FOOD\GOODIES\ICECREAM.DES
FOOD\GOODIES\PIE.DES
FOOD\GOODIES\PUDDING.DES
FOOD\GOODIES\JELLO.DES
       14 File(s) copied
```

Exercise 52 continued...

13. **Display** the directory structure.

```
A:.
├───GAMES
├───FOOD
│   ├───VEGGIES
│   └───GOODIES
├───PROGRAMS
│   └───DATA
│       ├───SS
│       ├───DB
│       ├───WP
│       ├───LETTERS
│       ├───MEMOS
│       └───REPORTS
├───TEMP
├───BAK
│   ├───VEGGIES
│   └───GOODIES
├───TOYS
└───MISC
```

14. **Change** to the DATA directory.

15. **Transfer** files that end with .WK to the SS directory.

16. **Transfer** files that end with .DB to the DB directory.

17. **Transfer** files that end with .DOC to the WP directory.

18. **Change** to the root directory.

19. **Delete** the TOYS directory.

20. **Delete** the BAK directory branch.

21. **Display** the directory structure.

```
A:.
├───GAMES
├───FOOD
│   ├───VEGGIES
│   └───GOODIES
├───PROGRAMS
│   └───DATA
│       ├───SS
│       ├───DB
│       ├───WP
│       ├───LETTERS
│       ├───MEMOS
│       └───REPORTS
├───TEMP
└───MISC
```

22. **Print** the contents of the DUPLICATE Learning Disk.
The results are on the next page.

Exercise 52 continued...

Page breaks will vary.

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
Directory of A:\

GAMES          <DIR>      05-02-93   7:46p
FOOD           <DIR>      05-02-93   7:46p
PROGRAMS       <DIR>      05-22-93   8:41p
TEMP           <DIR>      XX-XX-XX   X:XXX
MISC           <DIR>      XX-XX-XX   X:XXX
        5 file(s)              0 bytes
Directory of A:\FOOD

.              <DIR>      05-02-93   7:46p
..             <DIR>      05-02-93   7:46p
VEGGIES        <DIR>      05-02-93   8:27p
GOODIES        <DIR>      05-02-93   8:28p
        4 file(s)              0 bytes
Directory of A:\FOOD\GOODIES

.              <DIR>      05-02-93   8:28p
..             <DIR>      05-02-93   8:28p
CAKE     DES           8 05-02-93   8:45p
COOKIES  DES          11 05-02-93   8:46p
ICECREAM DES          12 05-02-93   8:46p
PIE      DES           7 05-02-93   8:46p
PUDDING  DES          11 05-02-93   8:19p
JELLO    DES           9 05-02-93   8:23p
        8 file(s)             58 bytes
Directory of A:\FOOD\VEGGIES

.              <DIR>      05-02-93   8:27p
..             <DIR>      05-02-93   8:27p
CABBAGE  VEG          11 05-02-93   8:47p
CARROTS  VEG          11 05-02-93   8:47p
KALE     VEG           8 05-02-93   8:47p
LETTUCE  VEG          11 05-02-93   8:47p
CELERY   VEG          10 05-02-93   8:48p
CORN     VEG           8 05-02-93   8:17p
RADISH   VEG          10 05-02-93   8:17p
POTATOES VEG          12 05-02-93   8:18p
       10 file(s)             81 bytes
Directory of A:\GAMES

.              <DIR>      05-02-93   7:46p
..             <DIR>      05-02-93   7:46p
ASTRO    GAM           9 05-02-93   8:48p
CHESS    GAM           9 05-02-93   8:48p
JEOPARDY GAM          12 05-02-93   8:49p
CLUE     GAM           8 05-02-93   8:17p
TRIVIA   GAM          10 05-02-93   8:21p
OLDMAID  GAM          11 05-02-93   8:23p
        8 file(s)             59 bytes
Directory of A:\MISC

.              <DIR>      XX-XX-XX   X:XXX
..             <DIR>      XX-XX-XX   X:XXX
HELLO                 99 05-25-93   9:36p
HURRAH                54 05-02-93   8:40p
NOT                   60 05-25-93   9:37p
        5 file(s)            213 bytes
Directory of A:\PROGRAMS

.              <DIR>      05-22-93   8:41p
..             <DIR>      05-22-93   8:41p
CLS      DAT         290 04-22-93   4:05p
OPENING  DAT         319 04-22-93   4:05p
CD       DAT         479 04-22-93   3:57p
SHOWME   BAT         139 04-22-93   3:59p
DB       EXE       31458 04-22-93   3:21p
SS       EXE       31374 04-22-93   3:06p
WP       EXE       31426 04-22-93   3:10p
DATA           <DIR>      05-22-93   8:43p
       10 file(s)         95485 bytes
```

```
Directory of A:\PROGRAMS\DATA

.              <DIR>      05-22-93   8:43p
..             <DIR>      05-22-93   8:43p
SS             <DIR>      XX-XX-XX   X:XXX
DB             <DIR>      XX-XX-XX   X:XXa
WP             <DIR>      XX-XX-XX   X:XXa
LETTERS        <DIR>      XX-XX-XX   X:XXp
MEMOS          <DIR>      XX-XX-XX   X:XXp
REPORTS        <DIR>      XX-XX-XX   X:XXp
        8 file(s)              0 bytes
Directory of A:\PROGRAMS\DATA\DB

.              <DIR>      XX-XX-XX   X:XXa
..             <DIR>      XX-XX-XX   X:XXa
MEMBER   DB           9 05-25-93   9:28p
CLUB     DB           7 05-25-93   9:29p
MUSIC    DB           8 05-25-93   9:29p
        5 file(s)             24 bytes
Directory of A:\PROGRAMS\DATA\LETTERS

.              <DIR>      XX-XX-XX   X:XXp
..             <DIR>      XX-XX-XX   X:XXp
JONES    LET          9 05-02-93   7:48p
SMITH    LET          9 05-02-93   8:13p
LOPEZ    LET          9 05-02-93   8:13p
LETTER1               7 05-02-93   8:15p
LETTER2               7 05-02-93   8:16p
LETTER3               7 05-02-93   8:22p
        8 file(s)             48 bytes
Directory of A:\PROGRAMS\DATA\MEMOS

.              <DIR>      XX-XX-XX   X:XXp
..             <DIR>      XX-XX-XX   X:XXp
SMITH    MEM          9 05-02-93   8:20p
LOPEZ    MEM          9 05-02-93   8:21p
JONES    MEM          9 05-02-93   8:22p
MEMO3                 5 05-02-93   8:21p
MEMO1                 5 05-02-93   8:24p
MEMO2                 5 05-02-93   8:24p
        8 file(s)             42 bytes
Directory of A:\PROGRAMS\DATA\REPORTS

.              <DIR>      XX-XX-XX   X:XXp
..             <DIR>      XX-XX-XX   X:XXp
LOPEZ    RPT          9 05-02-93   8:19p
SMITH    RPT          9 05-02-93   8:20p
JONES    RPT          9 05-02-93   8:23p
REPORT3               7 05-02-93   8:16p
REPORT1               7 05-02-93   8:20p
REPORT2               7 05-02-93   8:25p
        8 file(s)             48 bytes
Directory of A:\PROGRAMS\DATA\SS

.              <DIR>      XX-XX-XX   X:XXa
..             <DIR>      XX-XX-XX   X:XXa
PAYROLL  WK          10 05-25-93   9:31p
SALES    WK           8 05-25-93   9:31p
GRADES   WK           9 05-25-93   9:32p
        5 file(s)             27 bytes
Directory of A:\PROGRAMS\DATA\WP

.              <DIR>      XX-XX-XX   X:XXa
..             <DIR>      XX-XX-XX   X:XXa
REPORT   DOC         10 05-25-93   9:30p
SCRIPT   DOC         10 05-25-93   9:30p
AGENDA   DOC         10 05-25-93   9:32p
        5 file(s)             30 bytes
Directory of A:\TEMP

.              <DIR>      XX-XX-XX   X:XXp
..             <DIR>      XX-XX-XX   X:XXp
        2 file(s)              0 bytes
Total files listed:
       99 file(s)          96115 bytes
                          XXXXXX bytes free
```

23 **Go on** to Worksheet 19.

If desired, **take** the disk out of drive A: and turn the computer off.

WORKSHEET 19

NAME _____

TOPIC 12 and EXERCISES 45, 46, 47, 48, 49, 50, and 51

DIRECTIONS: Use the following terms to fill in the blanks below.

XCOPY	Organize files	filename extension	Print contents of disk
filename	directory levels	directory structure	DELTREE (delete tree) DOS 6
directory	directory branch	RD (remove directory)	Delete directory DOS 5
transfer files			

1. The part of the disk structure that holds files that are stored on a disk. 1. _____

2. The layers of directory levels, starting with the root directory as level one. 2. _____

3. The organization of directories on a disk. Also called directory tree. 3. _____

4. Copies all the files (except hidden or system files) in a directory or an entire directory branch. 4. _____

5. Print all the directories and their files by issuing this command from the root directory: DIR/S>PRN. 5. _____

6. A directory and all the levels of directories that are under it. 6. _____

7. The name you assign to a collection of data that you store on a disk. 7. _____

8. Deletes a directory. 8. _____

9. Move files from one directory to another directory and remove the files from the original directory. 9. _____

10. Use filenames, filename extensions, and directories to arrange your files. 10. _____

11. The optional "period and up to three characters" at the end of a filename. 11. _____

12. Deletes a directory and all the files and subdirectories within it. 12. _____

(This page may be copied.)

WORKSHEET 20

NAME _____

LESSON FIVE, Questions and Commands

1. List two techniques for organizing your files.

   1. 1)_____

      2)_____

2. What part of a filename is especially useful for helping you work with *groups* of files?

   2. _____

3. Why does the hard disk need directories to organize its files?

   3. _____

4. What single command can DOS 6 users use to *transfer* files?

   4. _____

5. What two commands must DOS 5 users use to *transfer* files?

   5. _____

6. What command lets you copy a directory or an entire directory branch?

   6. _____

7. What command creates a directory?

   7. _____

8. What command removes an empty directory?

   8. _____

9. What DOS 6 commands deletes a directory and its files plus all levels of directories and their files that are under the directory (i.e., a directory branch)?

   9. _____

10. What steps must DOS 5 users use to "delete a directory" and all of the files in the directory?

    10. _____

NOTE: Remember that the term subdirectory (as used in this book) describes a ***directory*** *that is immediately under the* ***current*** *directory (while technically, every directory except the root directory can be called a subdirectory).*

WHAT IS THE COMMAND TO:

11. Make a subdirectory named LETTERS.

    11. _____

12. Copy files ending with .DOC from the current directory to a subdirectory named LETTERS.

    12. _____

13. Delete files ending with .DOC that are in the current directory.

    13. _____

14. Remove an empty subdirectory named TEMP.

    14. _____

15. Transfer files ending with .DB from the current directory to a subdirectory named DBASE.

    15. _____

16. Copy the MISC subdirectory to the TEMP subdirectory.

    16. _____

17. Copy the PROGRAMS directory branch to the BAK directory (both are subdirectories of the current directory).

    17. _____

18. Delete the MISC subdirectory.

    18. _____

19. Delete the FOOD directory branch (FOOD is a subdirectory).

    19. _____

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WINDOWS Lesson One
Getting Started

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TOPIC 1
The Computer System Hardware

☞ *Do Worksheets 1 and 2 on pages 168, 169*

Hardware is the group of parts that make up the computer system and that can be seen and touched.

A **computer** is an electronic device that performs complex tasks at high speed and with great accuracy. There are two main parts of a computer – the **processor** and the **memory**.

1) The **processor** is the "brains" of the computer – it processes instructions in the computer's memory. The 286, 386, and 486 chips are all **processors** (see page 162). The **processor** is also called the central processing unit (CPU) or microprocessor chip.

2) The **memory** is the area of the computer that holds instructions (programs) and information you give it. When the computer is turned off, everything in the memory disappears. The **memory** is also called random access memory (RAM) or main memory.

A **disk drive** is a device that transfers information back and forth between the computer and a disk.

Floppy disks are magnetically coated disks on which information (both programs and data typed from the keyboard) can be stored and retrieved. Floppy disks are put into and taken out of a disk drive.

The **hard disk** is a large capacity, permanent storage area that offers fast access to the information stored on it. Unlike floppy disks, the hard disk (along with its drive) is enclosed in a unit (usually within the computer case) that you do not handle.

Chips are small pieces of silicon wafers which often hold instructions to perform behind-the- scenes tasks, making it possible for you to use the computer. The *processor* and *memory* are special kinds of chips.

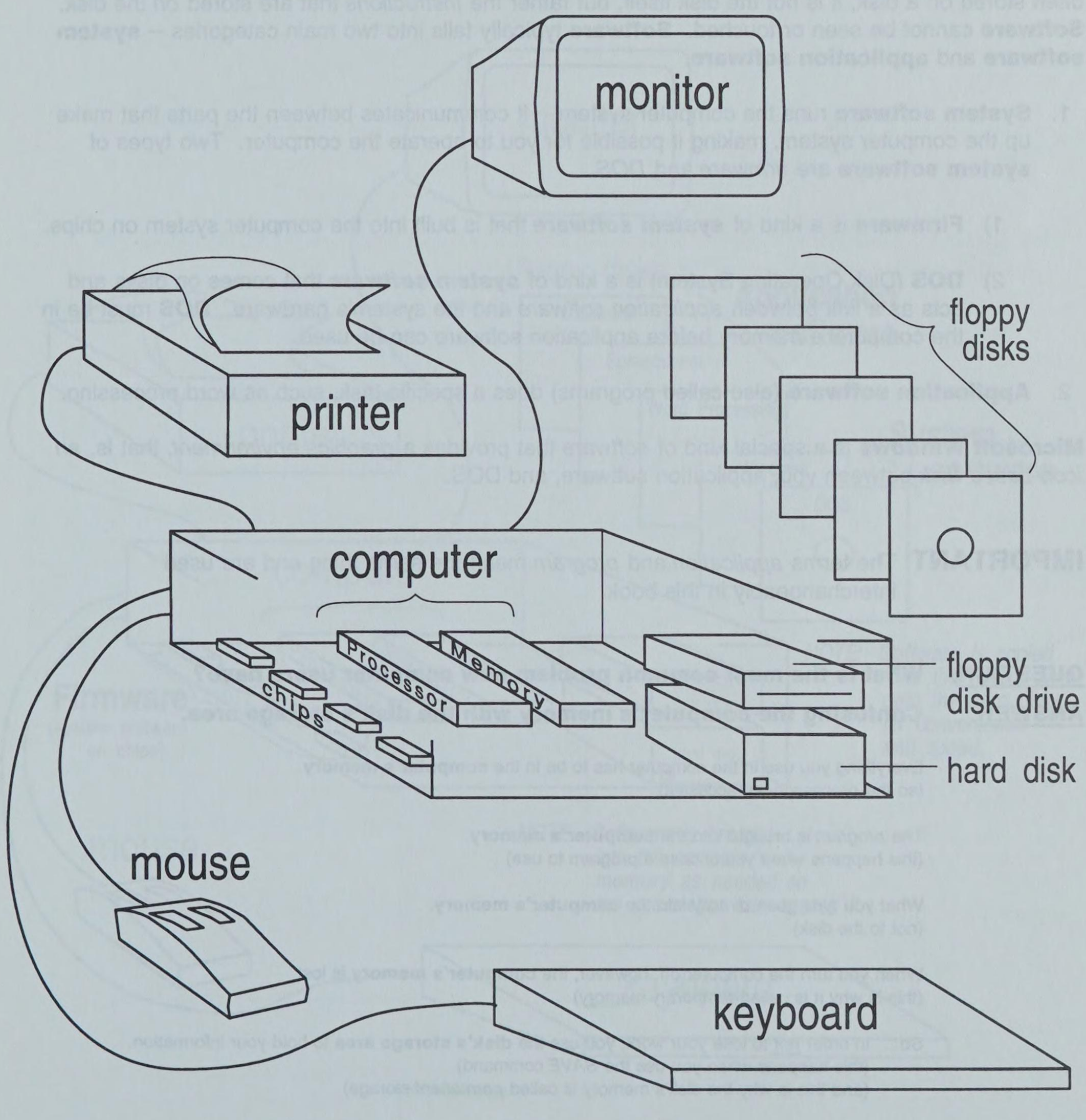
The **monitor** is a screen that displays the information in the computer.

The **keyboard** is used to enter data into and issue commands to the computer.

The **mouse** is a small, hand-held device used to control a pointer on the screen.

The **printer** transfers information from the computer to paper.

The Computer System
Hardware



TOPIC 2
The Computer System
Software

☞ *Do Worksheets 3 and 4 on pages 170, 171*

Software is the set of instructions (programs) that tell the computer what to do. While **software** is often stored on a disk, it is not the disk itself, but rather the *instructions* that are stored *on* the disk. **Software** cannot be seen or touched. **Software** typically falls into two main categories – **system software** and **application software**.

1. **System software** runs the computer system – it communicates between the parts that make up the computer system, making it possible for you to operate the computer. Two types of **system software** are *firmware* and *DOS*.

    1) **Firmware** is a kind of ***system software*** that is built into the computer system on chips.

    2) **DOS** (Disk Operating System) is a kind of ***system software*** that comes on disks and acts as a link between *application software* and the system's hardware. **DOS** must be in the computer's memory before application software can be used.

2. **Application software** (also called programs) does a specific task, such as word processing.

Microsoft Windows is a special kind of *software* that provides a *graphics environment*, that is, *an icon-based **link*** between you, application software, and DOS.

IMPORTANT: The terms *application* and *program* mean the same thing and are used interchangeably in this book.

QUESTION: **What is the most common problem new computer users have?**

ANSWER: **Confusing the computer's memory with the disk's storage area.**

Everything you use in the computer has to be in the **computer's memory**.
(so the *processor* can access it)

The *program* is brought into the **computer's memory**.
(this happens when you choose a program to use)

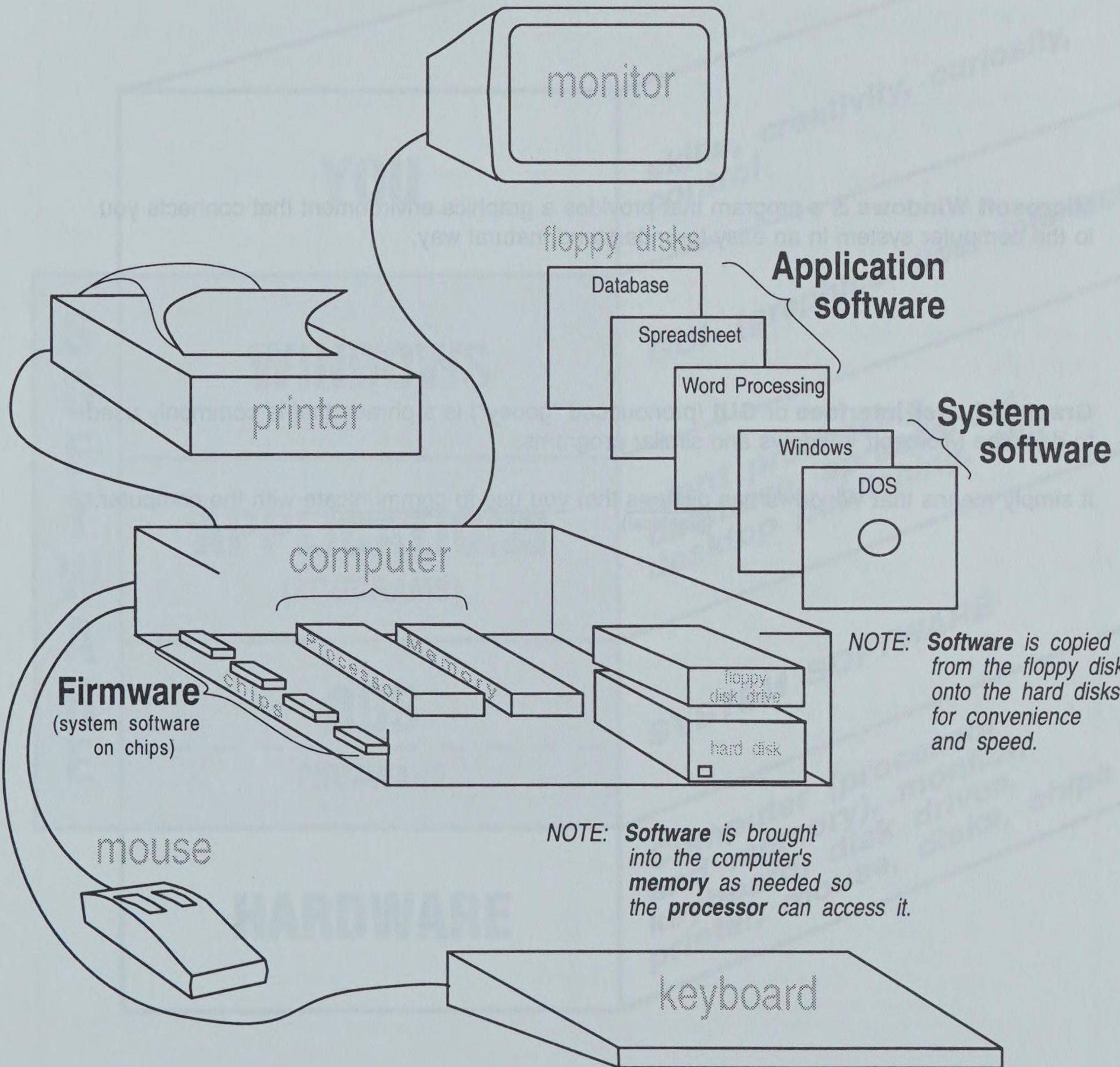
What you *type* goes *directly* into the **computer's memory**.
(not to the disk)

When you turn the computer off, however, the **computer's memory** is lost.
(this is why it is called *temporary* memory)

So... in order not to lose your work, you use the **disk's storage area** to hold your information.
(this happens when you use the *SAVE* command)
(and this is why the disk's memory is called *permanent* storage)

When you want to use your information again, you get it from the **disk's storage area** and put it into the **computer's memory**.
(this happens when you use the *OPEN* or *RETRIEVE* command)

The Computer System
Software



NOTE: ***Software*** *is copied from the floppy disks onto the hard disks for convenience and speed.*

NOTE: ***Software*** *is brought into the computer's* ***memory*** *as needed so the* ***processor*** *can access it.*

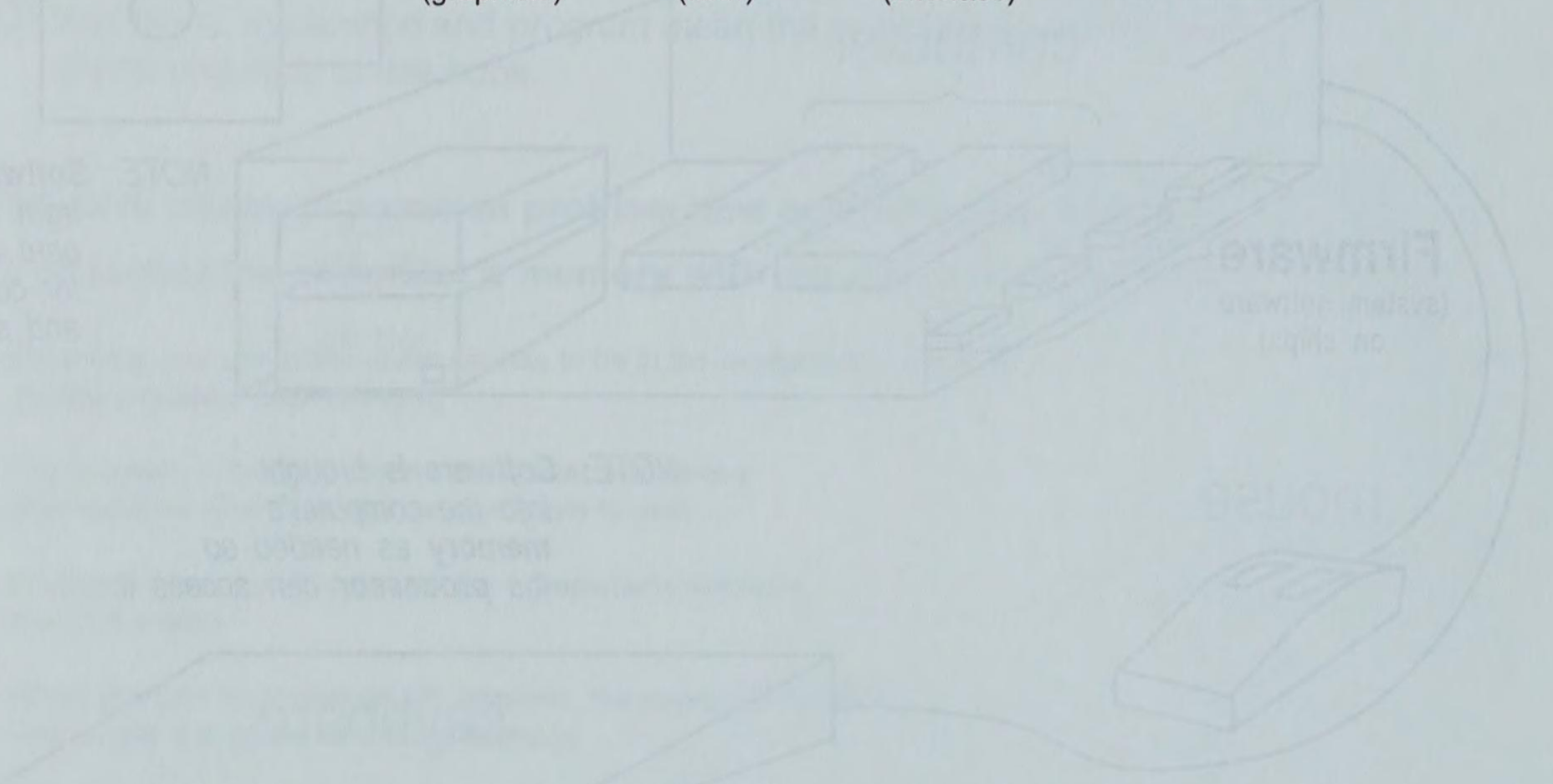
TOPIC 3
Microsoft Windows

☞ *Do Worksheet 5, page 172*
(Combined with the next two topics.)

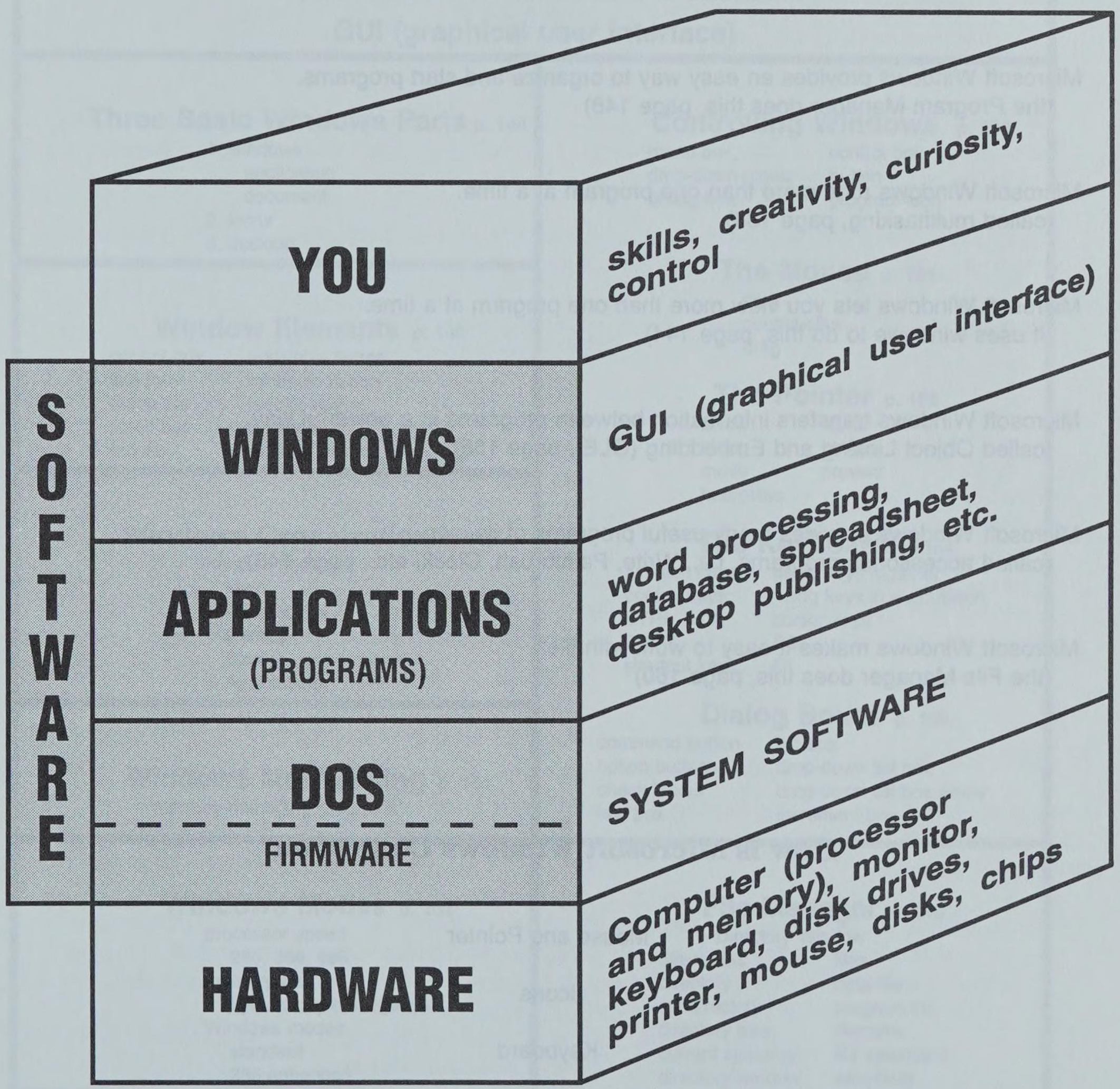
Microsoft Windows is a program that provides a graphics environment that connects you to the computer system in an easy-to-understand, natural way.

Graphical user interface or **GUI** (pronounced "gooey") is a phrase that is commonly used to describe Microsoft Windows and similar programs.

It simply means that Windows has pictures (graphical) that you use (user) to communicate (interface) with the computer.



The Complete Computer System



You control the computer system.
Windows acts as a link between you and programs.
DOS acts as a link between the programs and the hardware.

TOPIC 4
Windows Aspects

☞ *Do Worksheet 5, page 172*
(Combined with the previous and the next topics.)

What Does Microsoft Windows Do?

Microsoft Windows provides an easy way to organize and start programs.
(the Program Manager does this, page 148)

Microsoft Windows runs more than one program at a time.
(called multitasking, page 164)

Microsoft Windows lets you view more than one program at a time.
(it uses windows to do this, page 144)

Microsoft Windows transfers information between programs in a powerful way.
(called Object Linking and Embedding (OLE), page 166)

Microsoft Windows provides many useful programs of its own.
(called accessories programs, i.e., Write, Paintbrush, Clock, etc., page 148)

Microsoft Windows makes it easy to work with files.
(the File Manager does this, page 160)

How is Microsoft Windows Controlled?

Mouse and Pointer

Icons

Keyboard

Menu bar

Drop-down menus

Shortcut keys

Command buttons

Dialog boxes

Microsoft Windows Aspects

GUI (graphical user interface)

Three Basic Windows Parts p. 144
1. windows
   - application
   - document
2. icons
3. desktop

Window Elements p. 146
control box	maximize button
title bar	minimize button
menu bar	restore button
scroll bar	workspace
pointer	window borders & corners

Windows Organization p. 148
Program Manager
- Main
- Accessories
- Games
- Startup
- Applications

Windows Multitasking p. 164
memory-managing programs

Windows Modes p. 162
- processor speed
  - 286, 386, 486
- memory size
  - byte, kilobyte, megabyte
- Windows modes
  - standard
  - 386 enhanced

Windows Integration p. 166
clipboard
CUA (common user access)
OLE (object linking and embedding)

Controlling Windows p. 150
menu bar	control box
drop-down menu	button
dialog box	program icon

The Mouse p. 153
click
double-click
drag

The Pointer p. 152
arrow	hand
sizing	I-beam
move	prevent
hourglass	

The Keyboard p. 154
function keys	using keys together
control keys:	using keys in succession
CTRL, ALT,	cursor keys
SHIFT	ESC
shortcut keys	F1

Dialog Boxes p. 156
command button	list box
option buttons	drop-down list box
check boxes	drop-down list box arrow
text box	increment box

File Manager p. 160
Directory Window

directories	files
directory	data file
subdirectory	program file
directory tree	filename
current directory	file extension
directory window	associate

Windows Help p. 158
contents
search
how to use Help
glossary
about (application)

TOPIC 5
Three Basic Parts of Windows

☞ *Do Worksheet 5, page 172*
(Combined with the previous two topics.)

The three basic parts of Microsoft Windows are
1. **windows**,
2. **icons**, and
3. the **desktop**.

Windows are rectangular areas in which you view a task, application (program), or document. You may open several windows at one time. You may also shrink a window to an **icon**, enlarge it to fill the entire **desktop** (screen), or change it to any desired size in between.

Icons are pictures that represent various elements in Microsoft Windows, such as documents, programs, groups of programs, disk drives, files, and minimized windows.

The **desktop** is the background (screen) upon which **windows** and **icons** appear.

Icon Types

While **icons** are literally any picture, the term most frequently refers to:

application icons - graphics that represent *minimized, running* programs,
program icons - graphics that represent *non-running* programs,
group window icons - graphics that represent *minimized group* windows, and
document icons - graphics that represent *minimized document* windows.

Window Types

Any screen element that is in a rectangle and has a *title bar* can be called a window, including a dialog box and message window; but the two main types of windows are **application** windows and **document** windows.

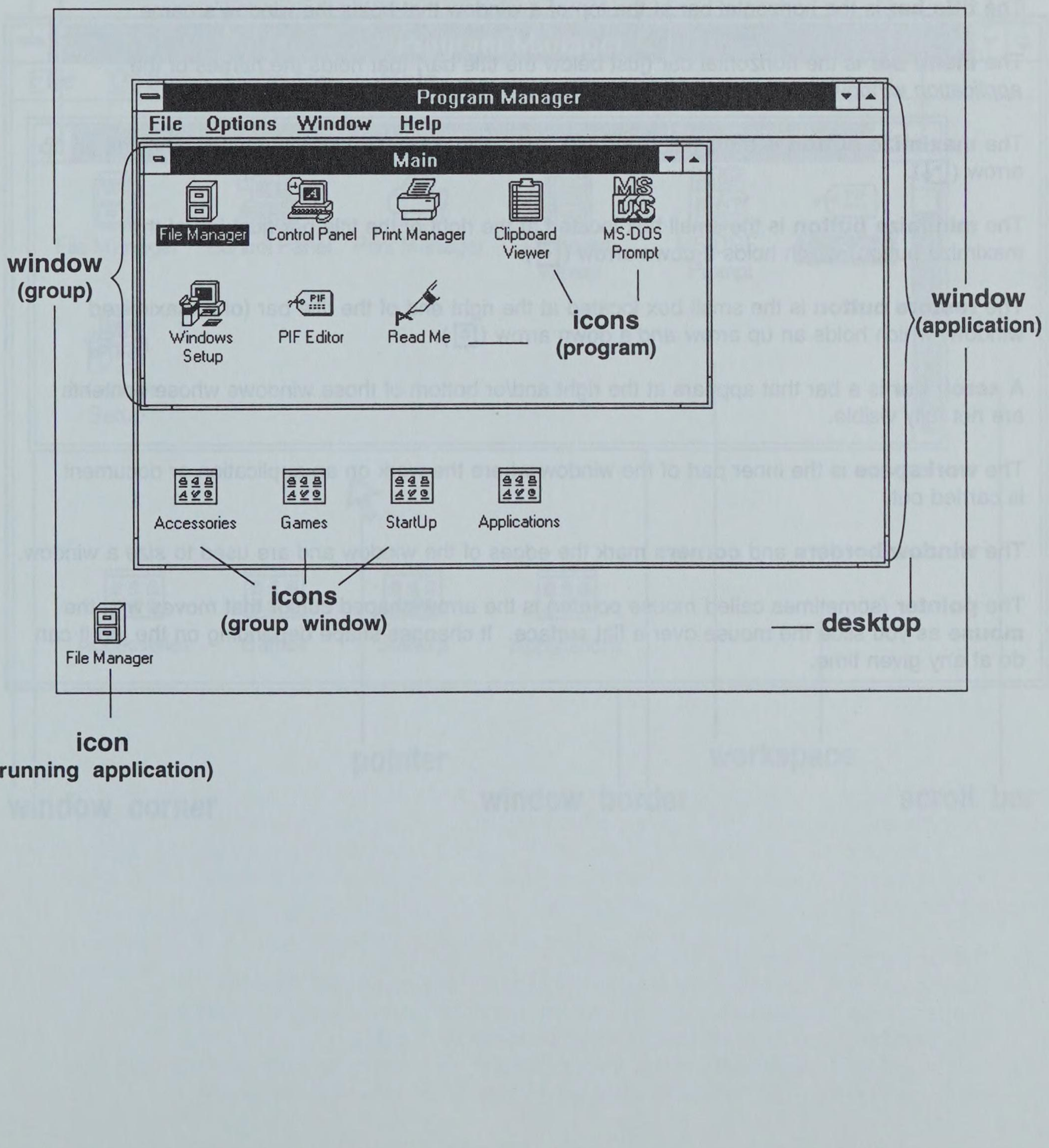
Application windows are windows that hold programs. An application window may hold multiple document windows, but it may not hold other application windows.
Application windows differ in appearance from *document windows* in two ways:
1) they have a *menu bar* (see next page), and
2) the *Control box* holds a "spacebar" icon — it is longer than the "hyphen" icon found in the *document window's* Control box (see next page).

Document windows are windows that are within an application window. There may be more than one *document* window in an *application* window. *Document* windows do not have their own *menu bar*—they sometimes share the menu bar with the application window they are in. The *document window's Control box* holds a "hyphen" icon.

Group windows are special kinds of document windows that are used to organize programs. They are found only in the Program Manager window (see page 148).

Three Basic Parts of Windows

1. **Windows**
2. **Icons**
3. **Desktop**



TOPIC 6
Windows Elements

☞ *Do Worksheets 6 and 7 on pages 173, 174*

While the three *basic* parts of Microsoft Windows are windows, icons, and the desktop, there are many other elements in Windows. Most of these elements are used to initiate an action.

The **control box** (or Control-menu box) is the box at the left end of the title bar that opens the Control menu. The *control box* for application windows holds a "spacebar" icon (longer), while the *control box* for document windows holds a "hyphen" icon (smaller).

The **title bar** is the horizontal bar at the top of a window that holds the window's name.

The **menu bar** is the horizontal bar (just below the title bar) that holds the names of the *application window's* menus. (*Document windows* do not have a menu bar.)

The **maximize button** is the small box located at the right end of the title bar which holds an up arrow ( ).

The **minimize button** is the small box located at the right of the title bar (just left of the maximize button) which holds a down arrow ( ).

The **restore button** is the small box located at the right end of the title bar (of a maximized window) which holds an up arrow *and* a down arrow ( ).

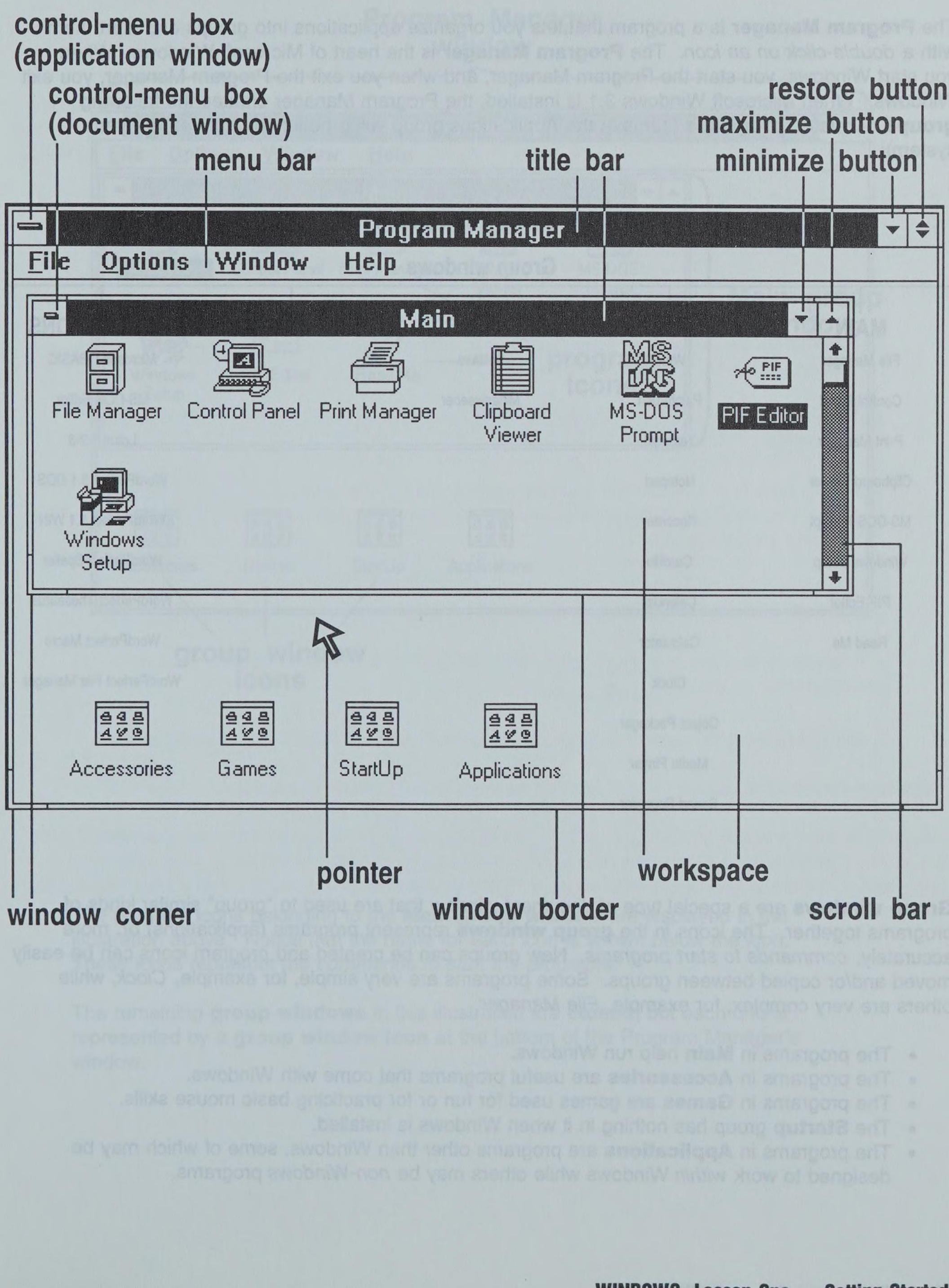
A **scroll bar** is a bar that appears at the right and/or bottom of those windows whose contents are not fully visible.

The **workspace** is the inner part of the window where the work on an application or document is carried out.

The **window borders** and **corners** mark the edges of the window and are used to *size* a window.

The **pointer** (sometimes called *mouse pointer*) is the arrow-shaped cursor that moves with the **mouse** as you slide the mouse over a flat surface. It changes shape depending on the job it can do at any given time.

Windows Elements



TOPIC 7
Windows Organization

☞ *Do Worksheet 8 on page 175*
(combined with next topic)

The **Program Manager** is a program that lets you organize applications into groups and start them with a *double-click on an icon*. The **Program Manager** is the heart of Microsoft Windows. When you start Windows, you start the Program Manager, and when you exit the Program Manager, you exit Windows. When Microsoft Windows 3.1 is installed, the Program Manager creates the following **groups** of related **programs** (items in the Applications group will probably be different on your system):

PROGRAM MANAGER

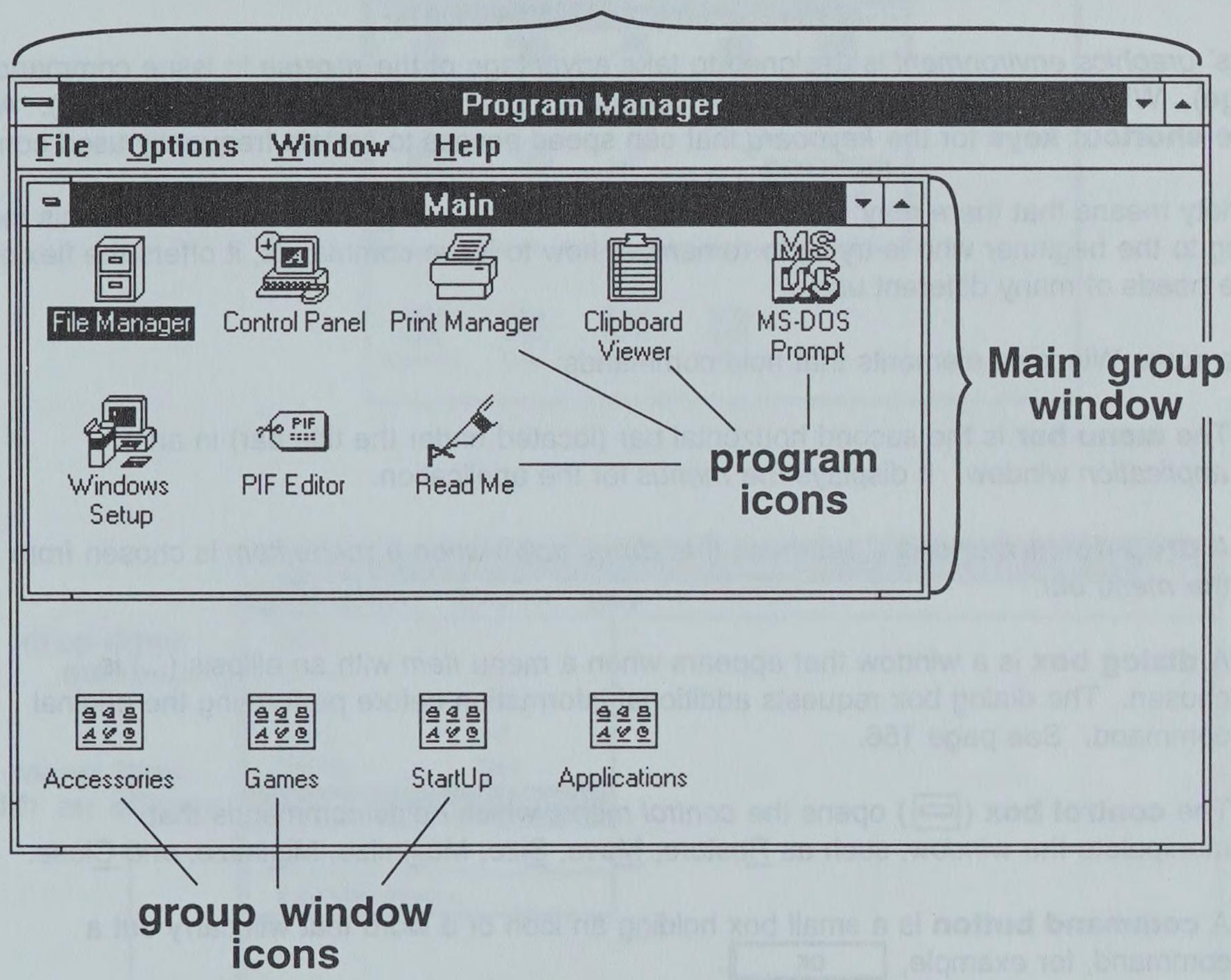
Group windows

MAIN	ACCESSORIES	GAMES	STARTUP	APPLICATIONS
File Manager	Write	Solitaire		Microsoft QBASIC
Control Panel	Paintbrush	Minesweeper		MS-DOS Editor
Print Manager	Terminal			Lotus 1-2-3
Clipboard Viewer	Notepad			WordPerfect 5.1 DOS
MS-DOS Prompt	Recorder			WordPerfect 5.1 WIN
Windows Setup	Cardfile			WordPerfect Speller
PIF Editor	Calendar			WordPerfect Thesaurus
Read Me	Calculator			WordPerfect Macro
	Clock			WordPerfect File Manager
	Object Packager			
	Media Player			
	Sound Recorder			

Group windows are a special type of document window that are used to "group" similar kinds of programs together. The icons in the **group windows** represent programs (applications) or, more accurately, *commands to start programs*. New groups can be created and program icons can be easily moved and/or copied between groups. Some programs are very simple, for example, *Clock,* while others are very complex, for example, *File Manager*.

- The programs in **Main** help run Windows.
- The programs in **Accessories** are useful programs that come with Windows.
- The programs in **Games** are games used for fun or for practicing basic mouse skills.
- The **Startup** group has nothing in it when Windows is installed.
- The programs in **Applications** are programs other than Windows, some of which may be designed to work *within* Windows while others may be *non-Windows* programs.

Windows Organization



The program icons belonging to the **Main group window** are displayed in the illustration above. Notice that the name for each icon is shown below the icon. These icons represent the *commands to start the programs*.

The remaining **group windows** in this illustration are **closed,** but each one is represented by a **group window icon** at the bottom of the Program Manager's window.

TOPIC 8
Controlling Windows

☞ *Do Worksheet 8 on page 175*
(combined with the previous topic)

Windows is controlled by using **commands**. **Commands** are instructions that cause an action to be carried out.

Windows' *graphics environment* is designed to take advantage of the ***mouse*** to issue commands (see next page). Windows commands can also be controlled from the ***keyboard*** (see page 154). And then there are **shortcut keys** for the *keyboard* that can speed access to certain frequently used commands.

This variety means that there may be several ways to activate a single command. While this may be confusing to the beginner who is trying to remember how to issue commands, it offers the flexibility to meet the needs of many different users.

Here are some Windows elements that hold commands:

The **menu bar** is the second horizontal bar (located under the title bar) in an *application* window. It displays the *menus* for the application.

A **drop-down menu** is a submenu that *drops down* when a *menu item* is chosen from the *menu bar.*

A **dialog box** is a window that appears when a menu *item* with an ellipsis (...) is chosen. The dialog box requests additional information before performing the original command. See page 156.

The **control box** (▭) opens the *control menu*, which holds commands that manipulate the *window*, such as Restore, Move, Size, Maximize, Minimize, and Close.

A **command button** is a small box holding an icon or a word that will carry out a command, for example, [OK].

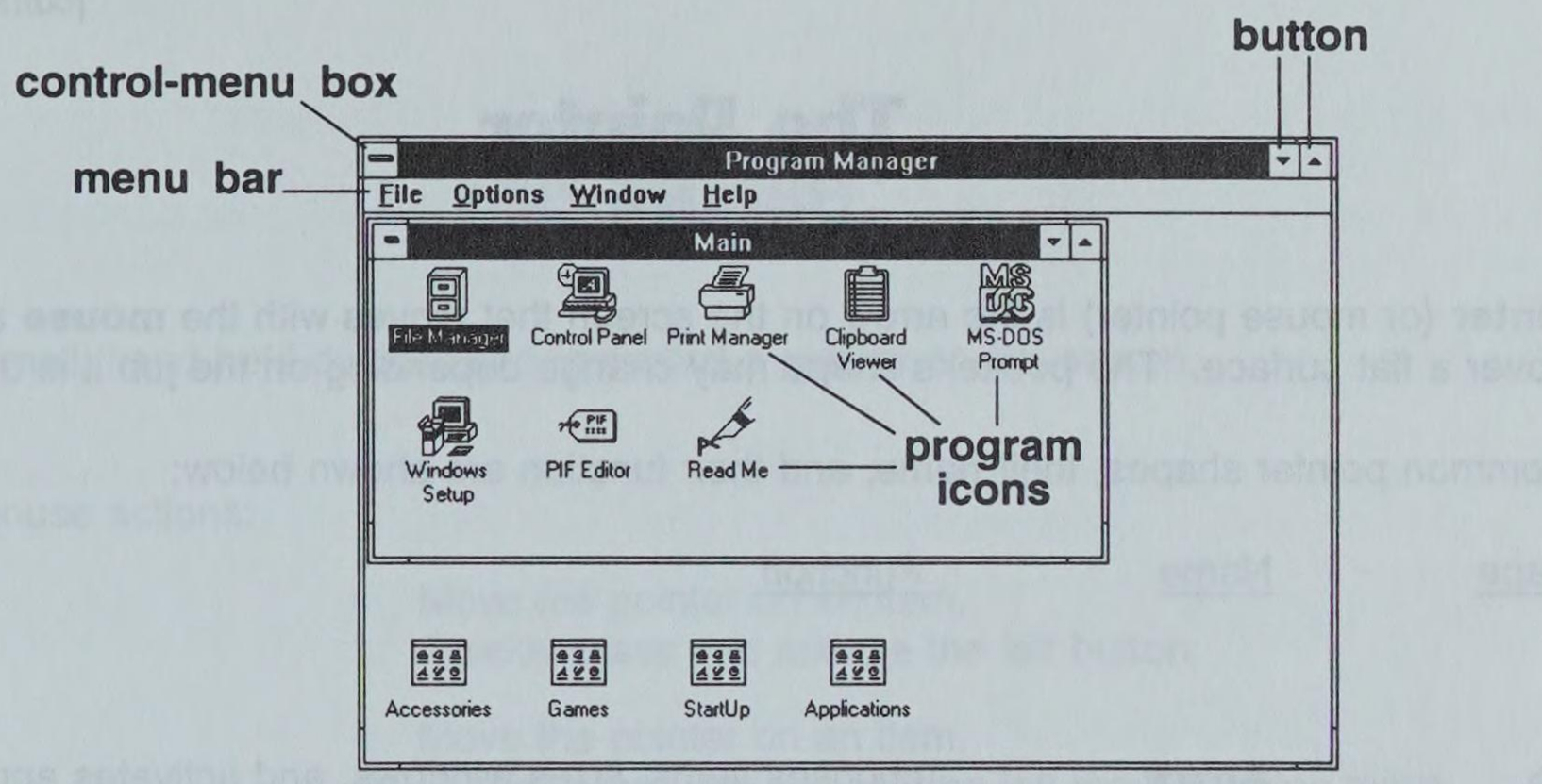
A **program icon** represents a program that can be started from a *group window.*

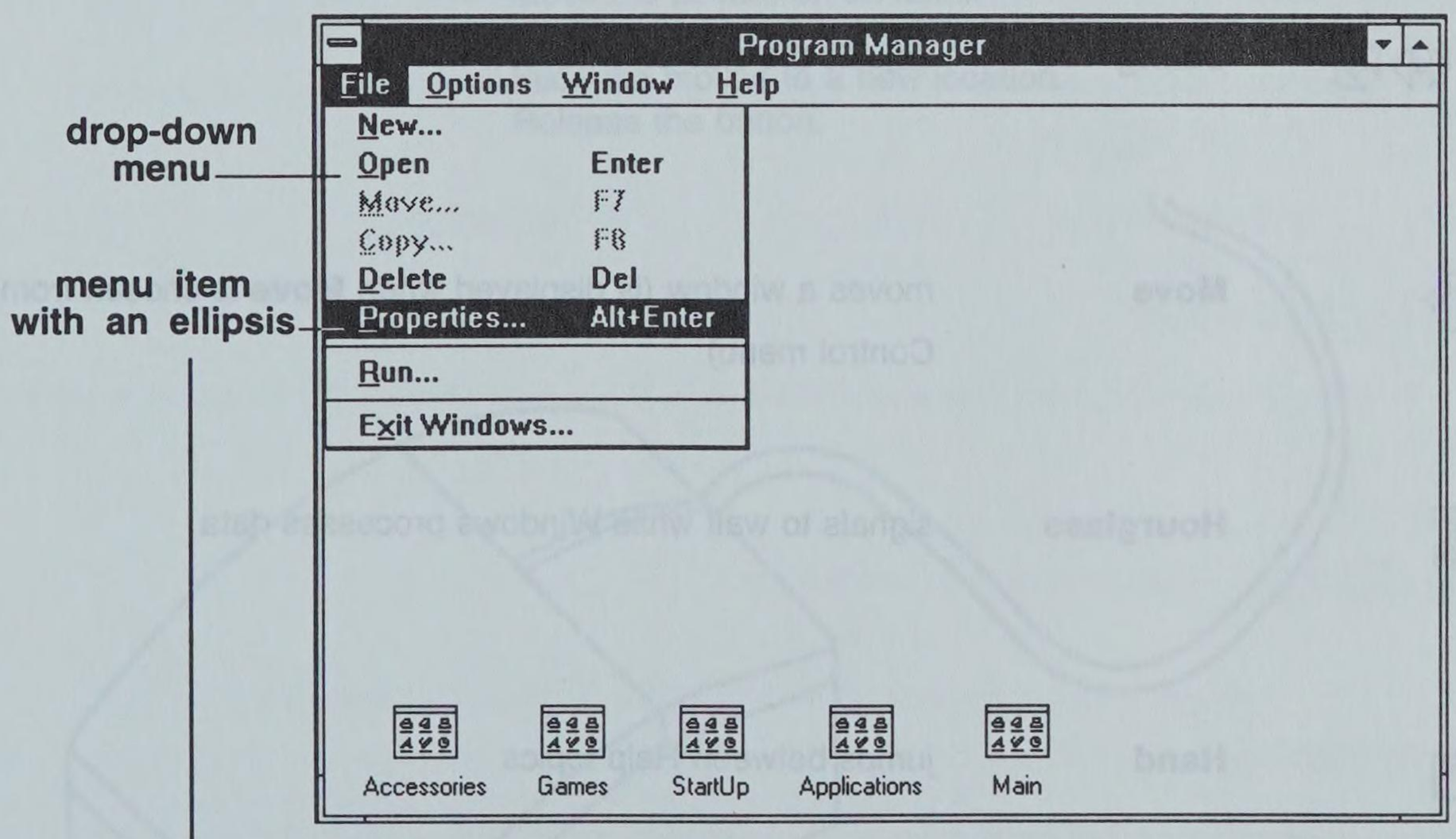
A **dimmed command**, shown in gray, cannot be used in the current situation.

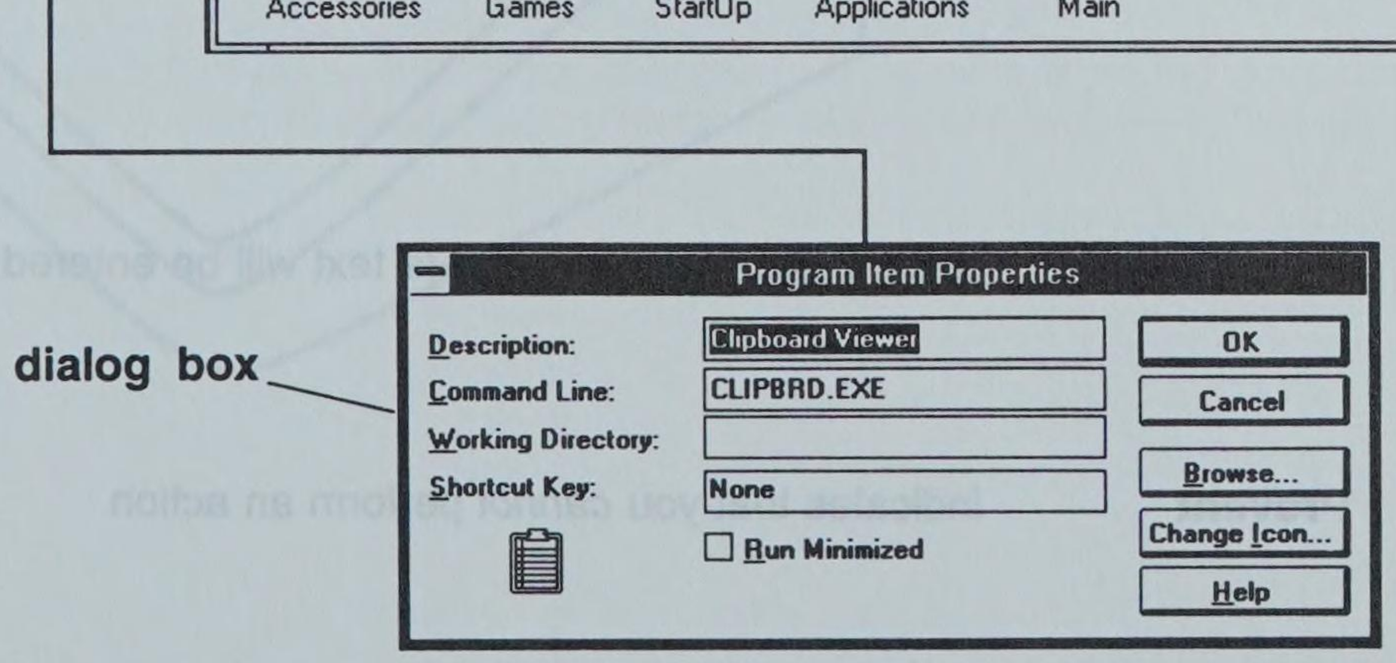
A **default** is an automatic setting in program. Windows has been designed with many **defaults** that best fit most situations. A command with a ✓ (check), an [X] (selected check box), or a command button with a *darker outline* represents either a Windows **default** or a selection that a user has made.

NOTE: The following topics (covered on the next few pages) relate to controlling Windows: the mouse and pointer, the keyboard, and dialog boxes.

Windows Command Elements







TOPIC 9
The Mouse and Pointer

☞ *Do Worksheet 9 on page 176*
(combined with the next topic)

The Pointer

The pointer (or mouse pointer) is the arrow on the screen that moves with the **mouse** as you slide the mouse over a flat surface. The pointer's shape may change depending on the job it is doing.

Some common pointer shapes, their name, and their function are shown below:

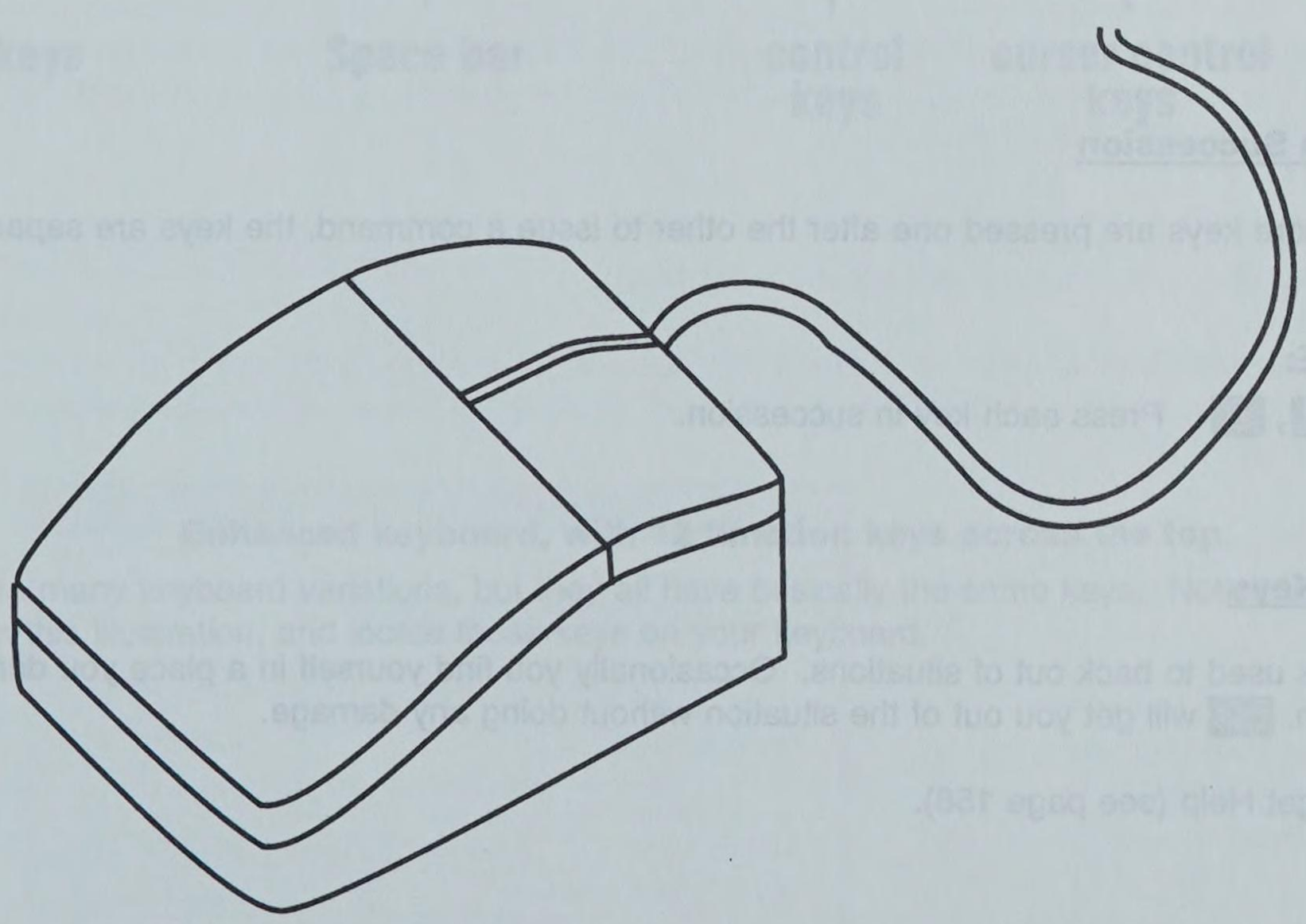
Shape	Name	Function
	Arrow	chooses items, sizes windows, and activates applications
	Sizing	adjusts the size of a window
	Move	moves a window (is displayed when **Move** is chosen from the Control menu)
	Hourglass	signals to wait while Windows processes data
	Hand	jumps between Help topics
	I-beam	text pointer—indicates where text will be entered
	Prevent	indicates that you *cannot* perform an action

The Mouse

The **mouse** is a small, hand-held device used to control a pointer on the screen.

There are three mouse actions:

Click	Move the pointer on an item. Quickly press and release the left button.
Double-click	Move the pointer on an item. Quickly press and release the left mouse button twice. NOTE: It may take some practice to perfect this mouse action.
Drag	Move the pointer on an item. Hold down the left button. Slide the mouse to a new location. Release the button.



- Always use the left mouse button unless otherwise instructed.

TOPIC 10
The Keyboard

☞ *Do Worksheet 9 on page 176*
(combined with the previous topic)

The **keyboard** is used to enter data into and issue commands to the computer.

Function keys are the ten or twelve keys labeled F1, F2, etc., and are located across the top (or at the left side) of the keyboard. They are used to issue commands.

Control keys (Shift, Ctrl, and Alt) are used in combination with other keys to issue commands.

Shortcut keys are key combinations that can be used to activate certain commands instead of using menus. If a command has a **shortcut**, the key combination is shown on the right of the command on the drop-down menu.

Using Keys Together

When two keys are used together to issue a command, a plus sign (+) is shown between the keys.

FOR EXAMPLE:

Alt + Tab	Press and hold down the Alt key, tap the Tab key, and then release the Alt key.

Using Keys in Succession

When two or more keys are pressed one after the other to issue a command, the keys are separated by a comma.

FOR EXAMPLE:

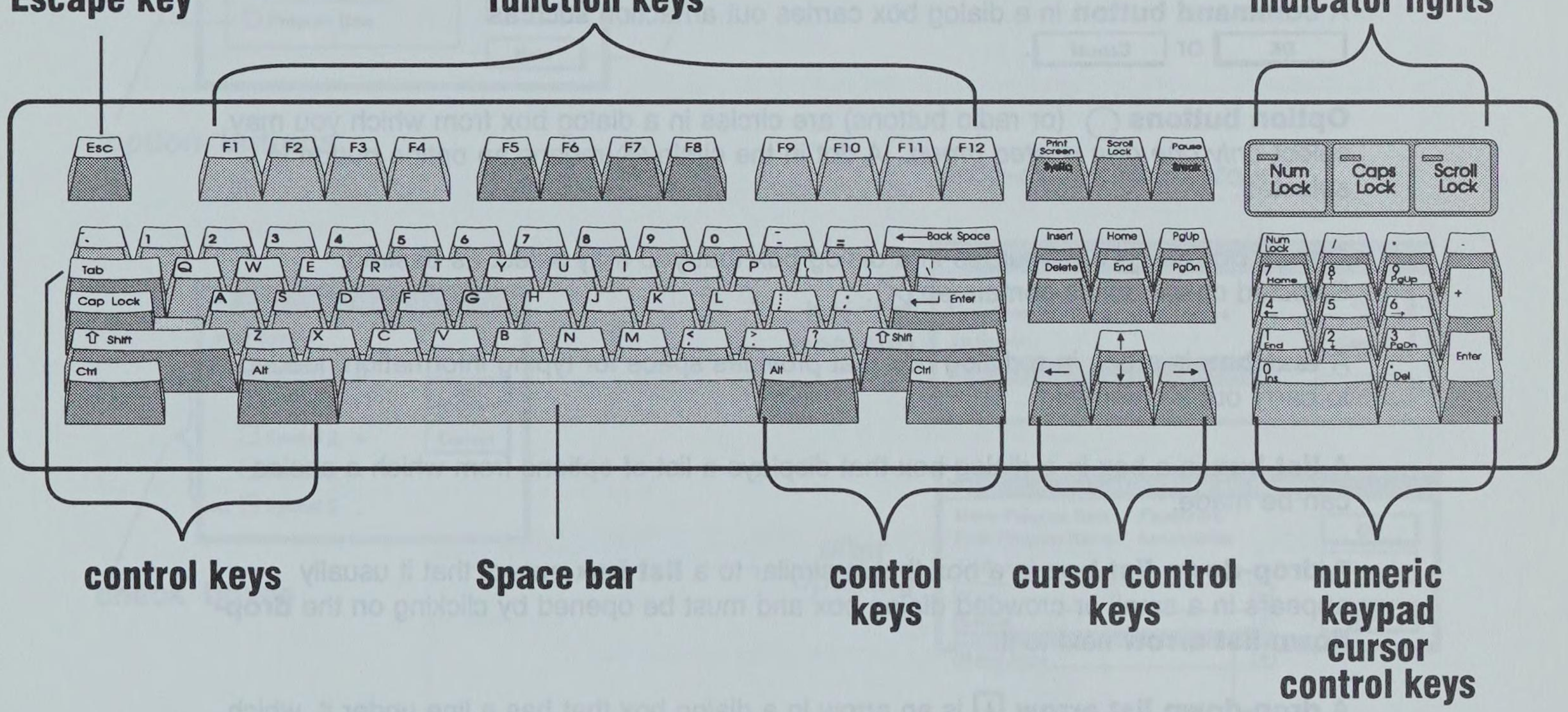
F4, M, E	Press each key in succession.

Two Special Keys

Esc (escape) is used to back out of situations. Occasionally you find yourself in a place you don't want to be, and often, Esc will get you out of the situation without doing any damage.

F1 is used to get Help (see page 158).

The Keyboard



Enhanced keyboard, with 12 function keys across the top.

There are many keyboard variations, but they all have basically the same keys. Notice the special keys shown in this illustration, and locate those keys on your keyboard.

TOPIC 11
Dialog Boxes

☞ *Do Worksheet 10 and 11 on pages 177, 178*

When a command that is followed by an ellipsis (...) is chosen from the menu, a **dialog box** appears. The **dialog box** requests additional information before Windows performs the original command.

Certain control features that are used primarily within **dialog boxes** are listed below:

A **command button** in a dialog box carries out an action such as [OK] or [Cancel].

Option buttons ◯ (or radio buttons) are circles in a dialog box from which you may select *only one of a related group.* A dot in the circle ◉ means an option button is selected.

Check boxes ☐ are squares in a dialog box that you may select as desired. Selected check boxes contain an ☒.

A **text box** is a box in a dialog box that provides space for typing information needed to carry out a command.

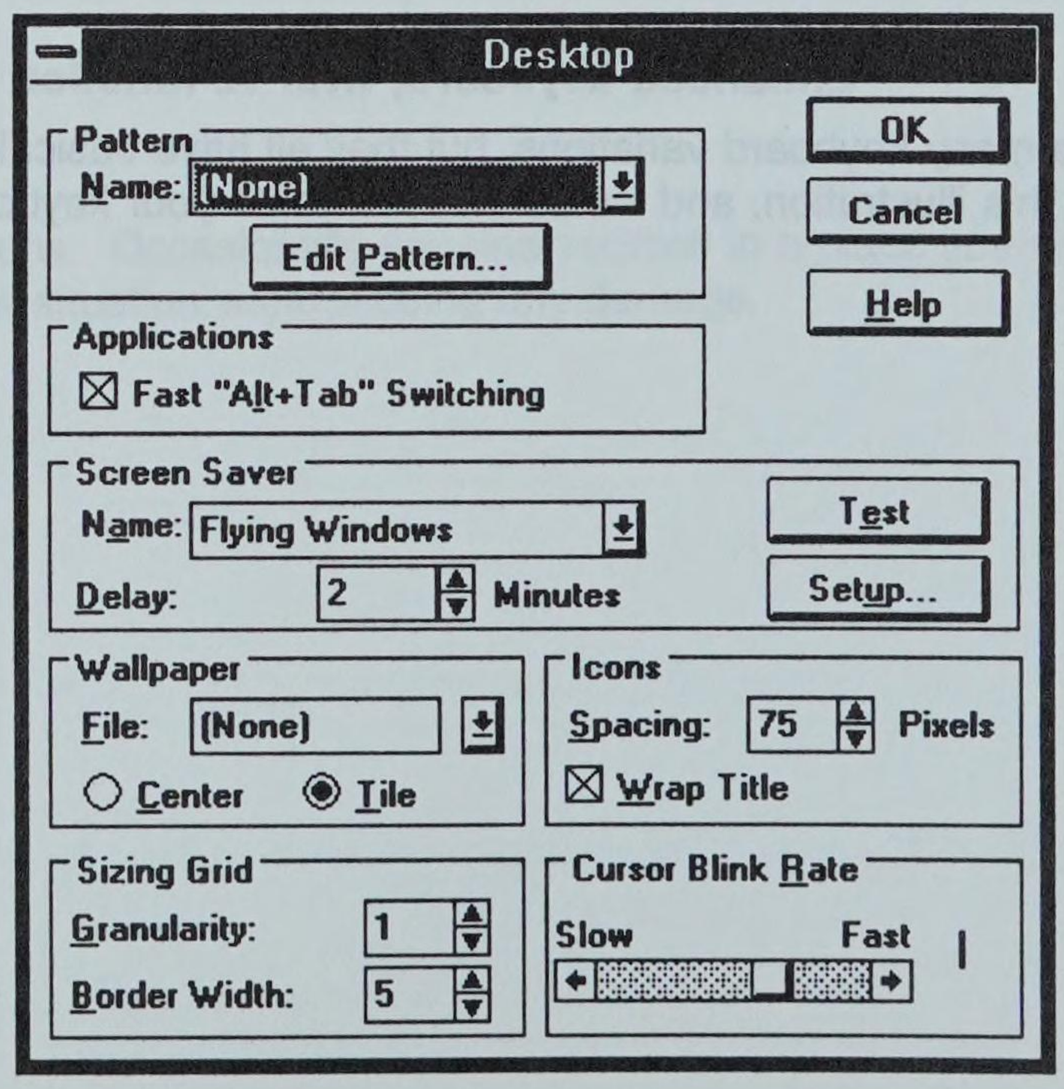
A **list box** is a box in a dialog box that displays a list of options from which a choice can be made.

A **drop-down list box** is a box that is similar to a **list box** except that it usually appears in a small or crowded dialog box and must be opened by clicking on the **drop-down list arrow** next to it.

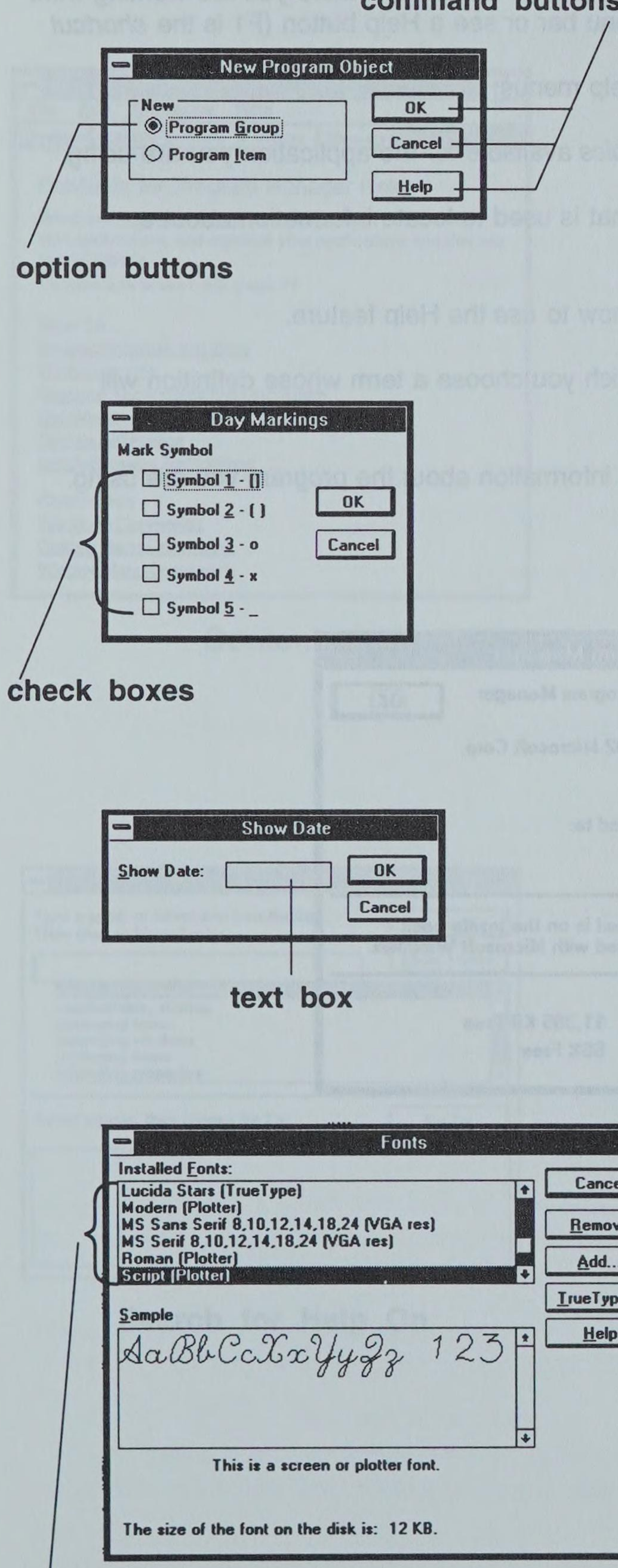
A **drop-down list arrow** is an arrow in a dialog box that has a line under it, which indicates that it can open a **drop-down list box**.

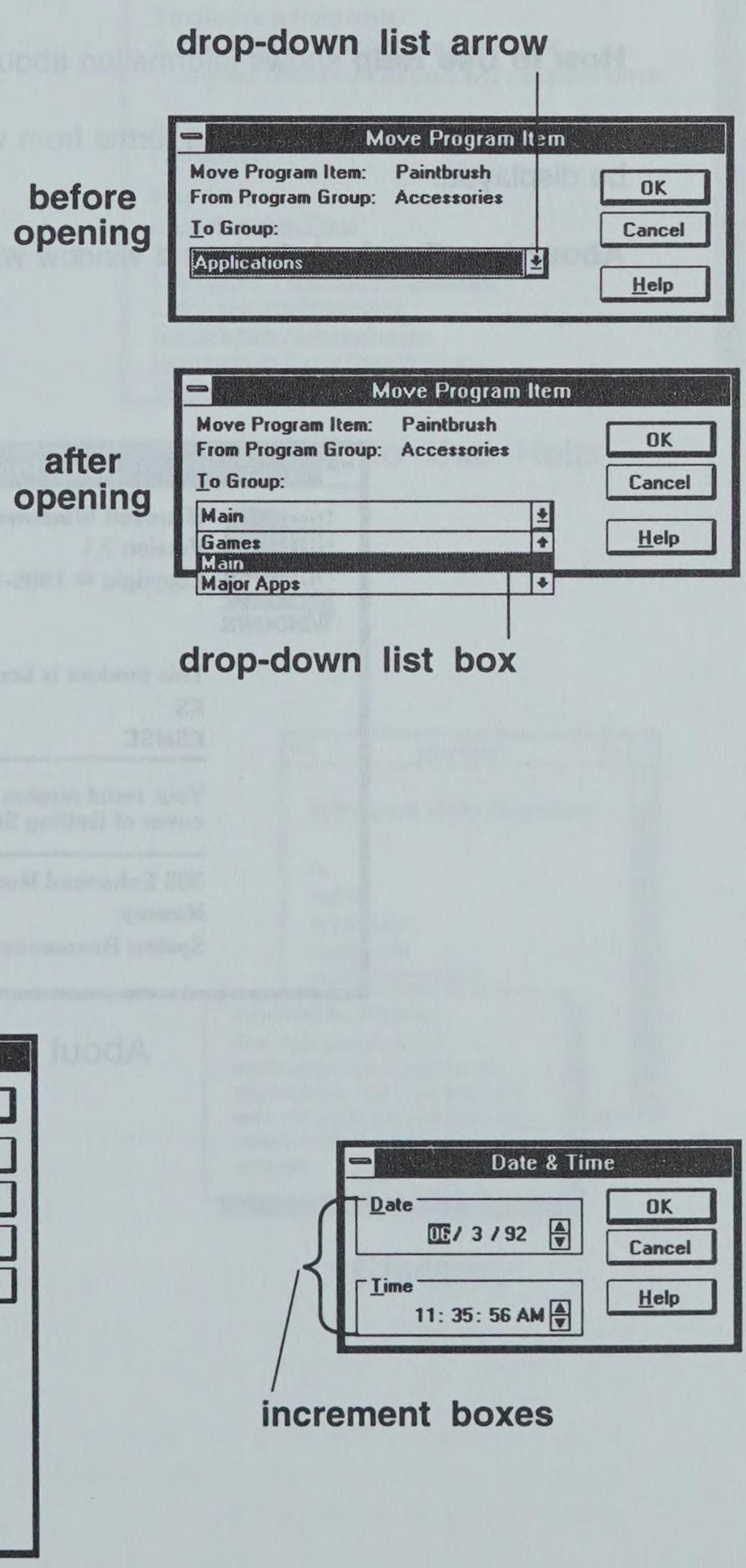
An **increment box** is a box in a dialog box used to set a value by providing an up and a down arrow, which, when clicked on, changes the original value. A new value can also be *typed* in.

How many of the control features listed above can you find in this dialog box?



Dialog Boxes





TOPIC 12
Windows Help

☞ *Do Worksheet 12 on page 179*

Windows **Help** is a quick and easy way to look up information about the feature you are working with. **Help** can be used whenever you see Help on the menu bar or see a Help button (F1 is the *shortcut key* for Help).
The following ways to use Help are found on most Help menus:

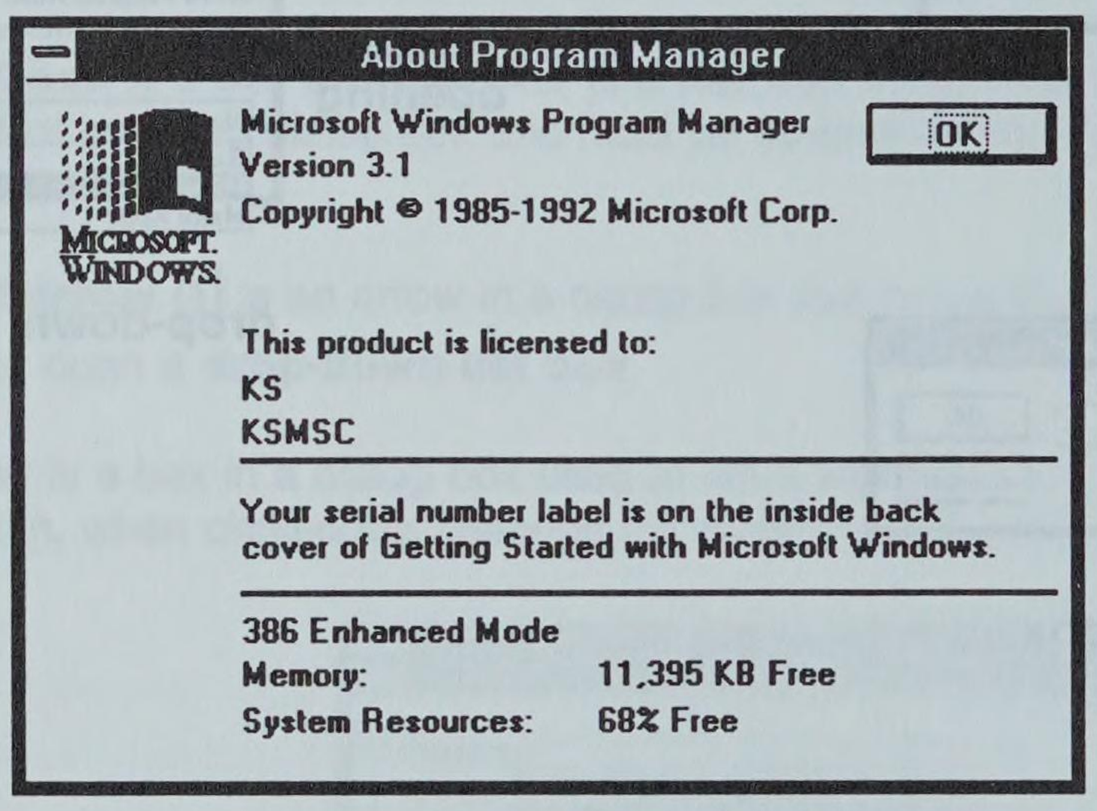
Contents is an alphabetic list of the Help *topics* available for the application you are using.

Search for Help On displays a dialog box that is used to locate information about a specific topic.

How to Use Help shows information about how to *use* the Help feature.

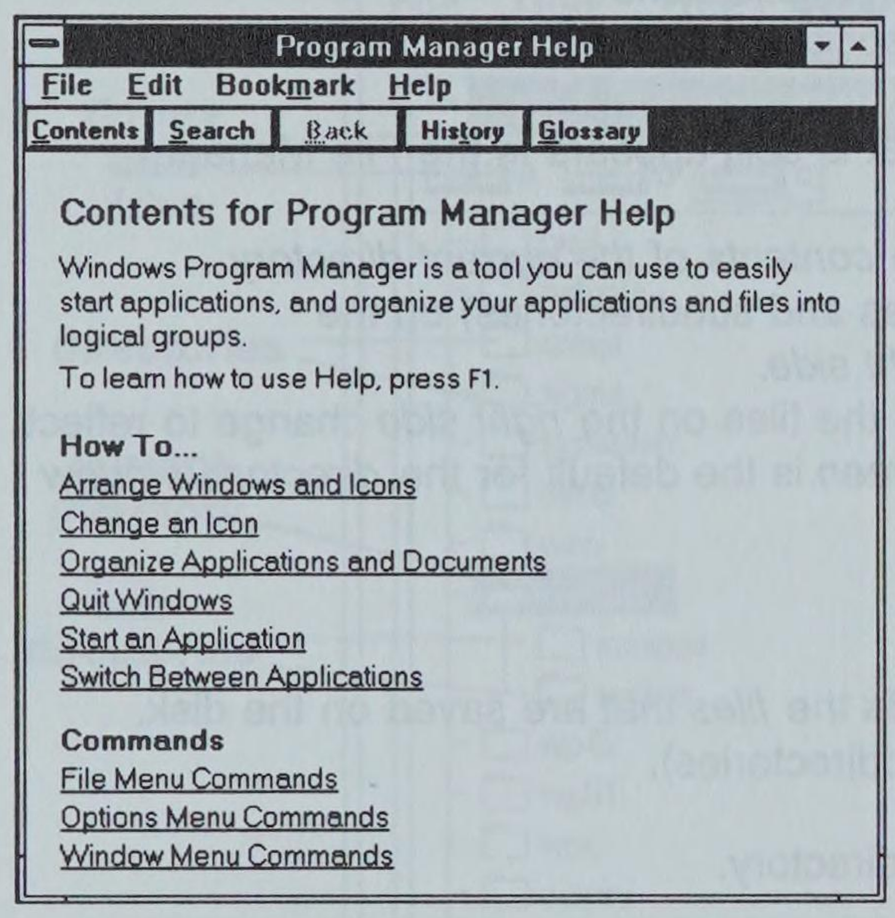
Glossary is a list of Windows terms from which you choose a term whose definition will be displayed.

About (application) displays a window with information about the program you are using.

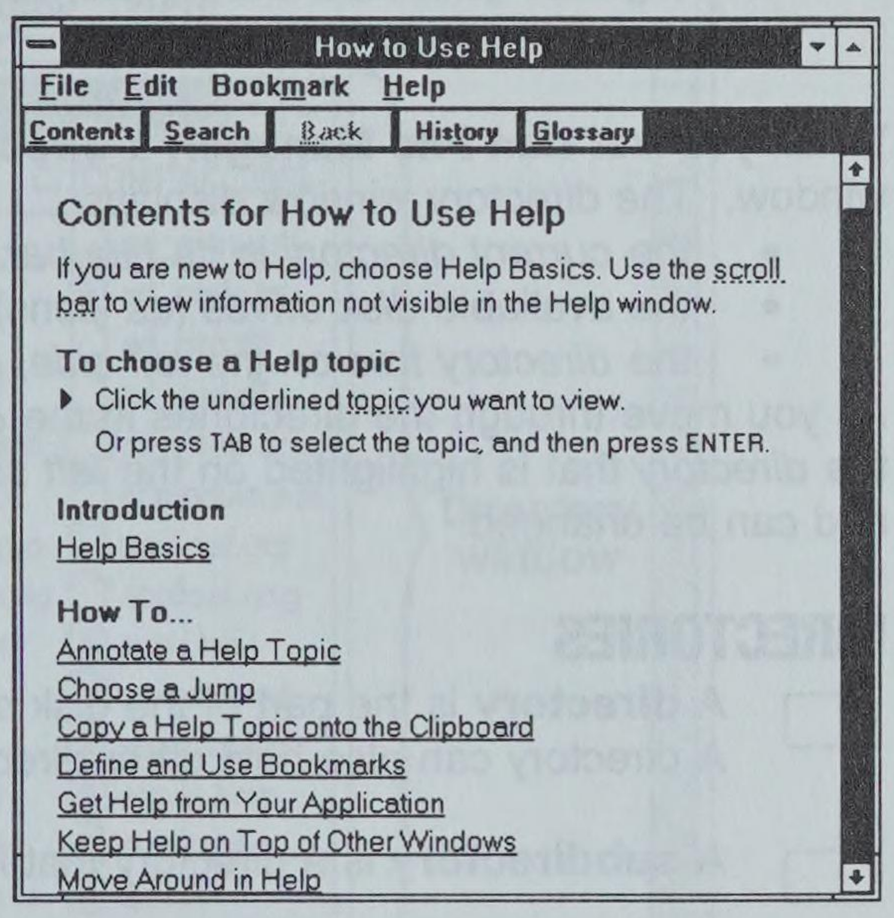


About (Application)

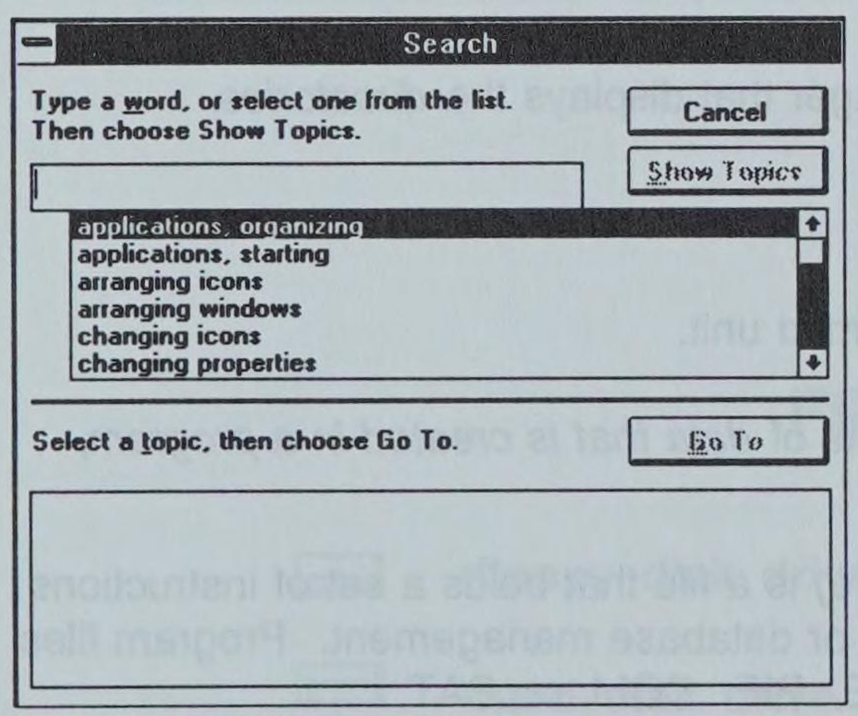
Help Screens



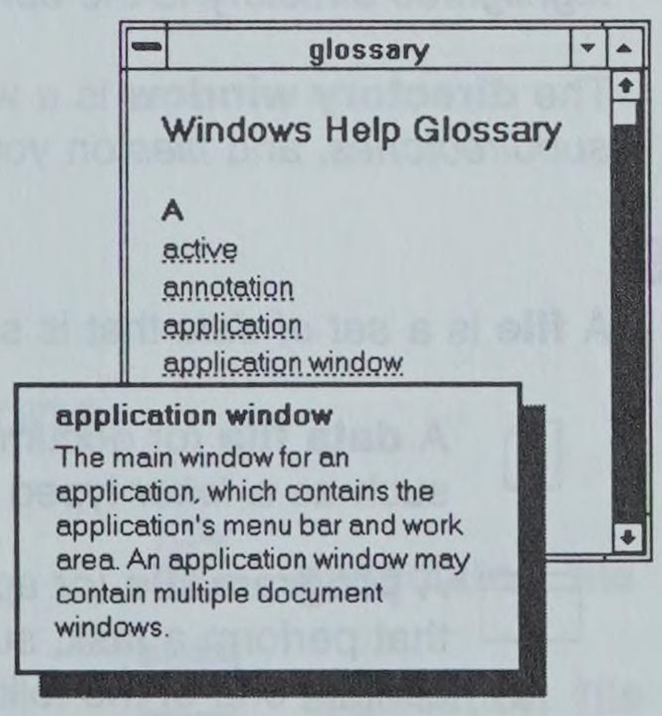
Contents



How to Use Help



Search for Help On



Glossary

TOPIC 13
File Manager

☞ *Do Worksheet 13 on page 180*

The **File Manager** is a program used to control your files. With **File Manager** you can

- view all your directories, subdirectories, and files
- organize your files and directories
- move and copy files
- sort your files by name, type, size, or date
- start applications
- associate a file with a program

When you first start **File Manager**, a **directory window** that is *split* appears in the File Manager window. The directory window displays

- the *current directory* in its *title bar*,
- the available *disk drives* (as icons)
- the *directory tree* on the *left side*, and
- the *contents of the current directory* (files and subdirectories) on the *right side*.

As you move through the directories in the *directory window*, the files on the *right side* change to reflect the *directory* that is highlighted on the *left side*. The *split screen* is the default for the *directory window* and can be changed.

DIRECTORIES

A **directory** is the part of the disk structure that holds the *files* that are saved on the disk. A directory can also hold other directories (called subdirectories).

A **subdirectory** is a directory that is within another directory.

A **root directory** is the top-level directory; for example, **C:** is the root directory on most hard disks.

A **directory tree** is a display of the directory structure (directories and subdirectories) on a disk.

The **current directory** is the directory you are working in. In the File Manager, the *highlighted* directory is the *current directory*.

The **directory window** is a window within File Manager that displays the *directories*, *subdirectories*, and *files* on your disk.

FILES

A **file** is a *set of data* that is saved on a disk as a named unit.

A **data file** (or document) is a file that consists of *data that is created in a program*, such as a *letter* typed into a *word processor*.

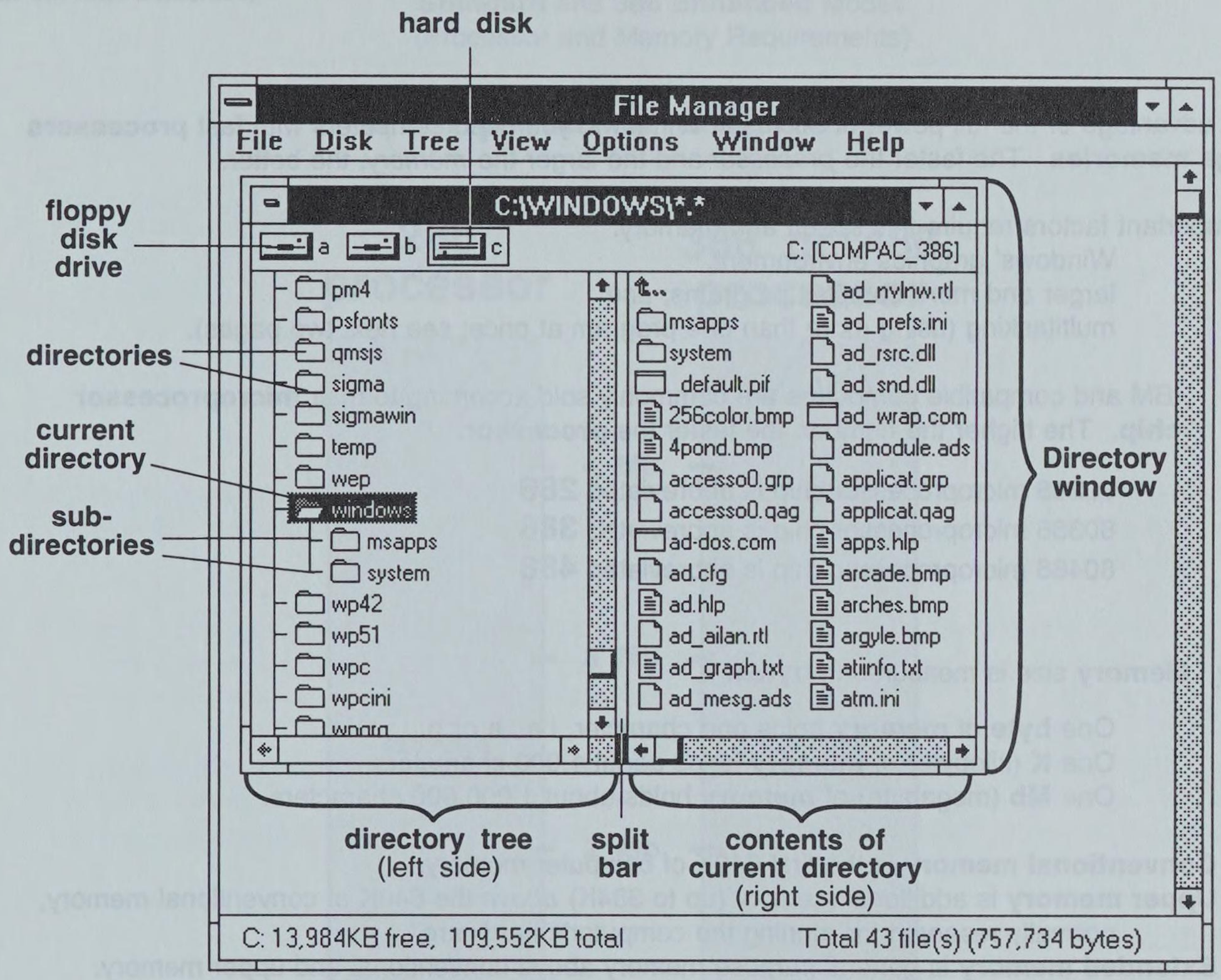
A **program file** (or application file, or software) is a file that holds a set of instructions that perform a task, such as word processing or database management. Program files contain one of the following extensions: .EXE, .PIF, .COM, or .BAT.

A **filename** is the name you assign to a *set of data* that you save on a disk. The name may have up to eight characters and may include an extension (a period followed by up to three characters), for example: LETTER.WRI

A **filename extension** is the "optional period and up to three characters" at the end of a *filename*. A *file extension* is often used to identify *groups* of related files and is automatically added by some applications.

An **associated file** is a file that has a *filename extension* that identifies it as "belonging" to a certain application, such as Write (.WRI) or Paintbrush (.BMP).

File Manager



File Manager Icons

floppy disk drive

hard disk drive

directory

current directory

associated file

application file

hidden file

all other files

TOPIC 14
Windows Modes

☞ *Do Worksheet 14 on page 181*
(combined with the next topic)

To take advantage of the full power of Microsoft Windows, you need computers with fast **processors** and large **memories**. The faster the *processor* and the larger the *memory*, the better.

Three important factors require this speed and memory:
Windows' graphics environment,
larger and more complex programs, and
multitasking (using more than one program at once; see next two pages).

Speed. IBM and compatible computers are commonly sold according to their **microprocessor chip**. The higher the number, the faster the **processor**.

80286 microprocessor chip is abbreviated **286**
80386 microprocessor chip is abbreviated **386**
80486 microprocessor chip is abbreviated **486**

Memory. **Memory** size is measured in **bytes**:

One **byte** of **memory** holds one character, i.e., a or b.
One **K** (kilobyte) of **memory** holds about 1,000 characters.
One **Mb** (megabyte) of **memory** holds about 1,000,000 characters.

Conventional memory is the first 640K of computer memory.
Upper memory is additional memory (up to 384K) *above* the 640K of conventional memory, normally reserved for running the computer's hardware.
Extended memory is general purpose memory above conventional and upper memory.

Windows 3.1 can run with a little less than 1 Mb of memory (640K conventional plus 256K extended). However, to realize the full power of Windows 3.1, you need at least 2 Mb and preferably 4 Mb to 8 Mb of memory.

Windows Modes

Window 3.1 can run in two modes, **standard mode** and **386 enhanced mode**, depending on your system's capabilities. When you start Windows (using WIN), the most appropriate mode for your system is automatically used.

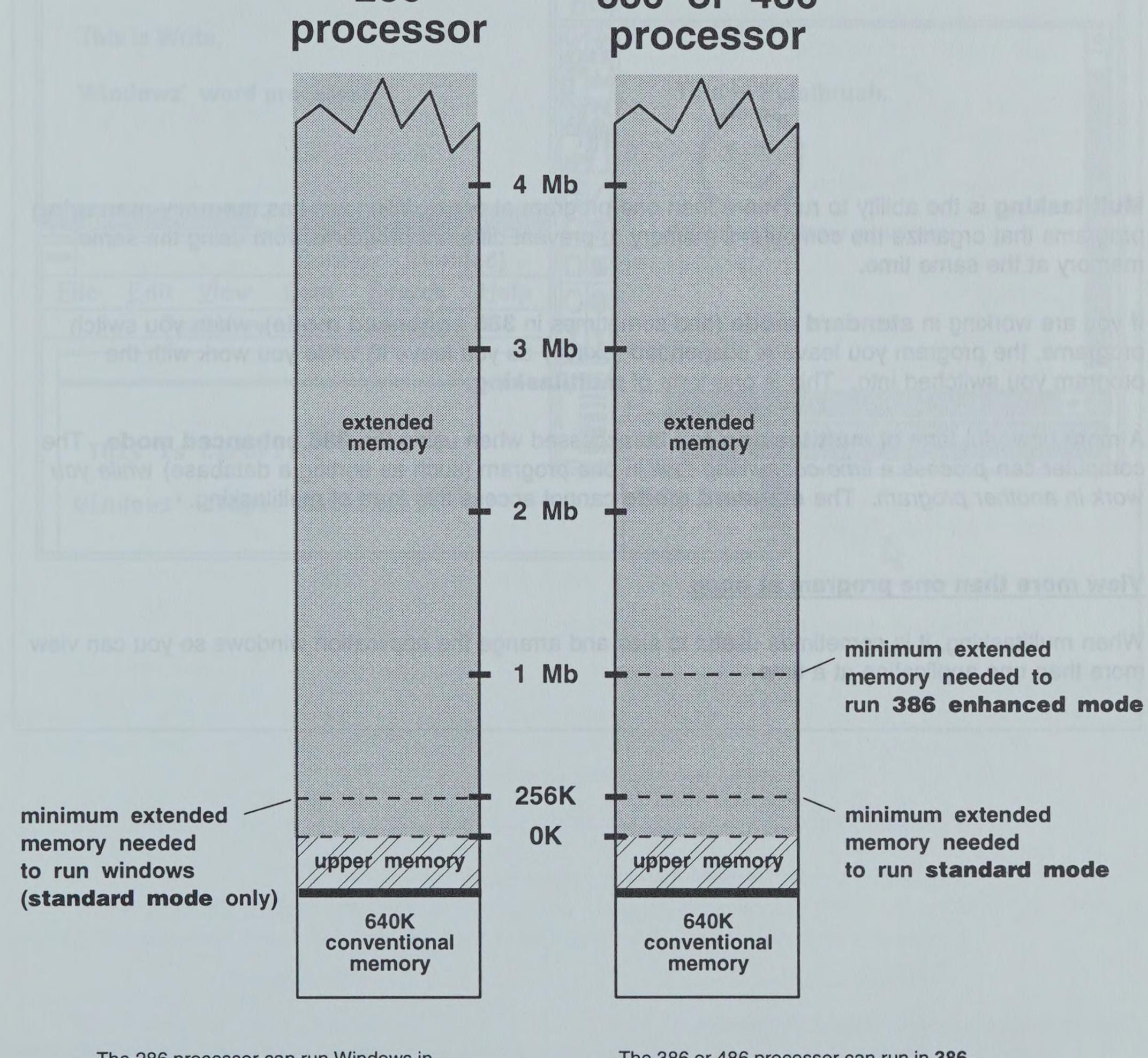
Windows runs in **standard mode** if you have a 286 (or higher) processor with 640K of conventional memory plus at least 256K of extended memory.

Windows runs in **386 enhanced mode** if you have a 386 (or higher) processor with 640K of conventional memory plus at least 1 Mb of extended memory.

Windows Modes

Standard and **386 Enhanced** Modes
(Processor and Memory Requirements)

Computer's Memory



The 286 processor can run Windows in **standard mode** only. The computer must have at least 256K of extended memory to run Windows.

The 386 or 486 processor can run in **386 enhanced mode** if the computer has at least 1 Mb of extended memory. It can run in standard mode if the computer has at least 256K of extended memory.

TOPIC 15
Windows Multitasking

☞ *Do Worksheet 14 on page 181 (combined with the previous topic)*

Multitasking is the ability to run more than one program at once. Windows has **memory-managing** programs that organize the computer's memory to prevent different programs from using the same memory at the same time.

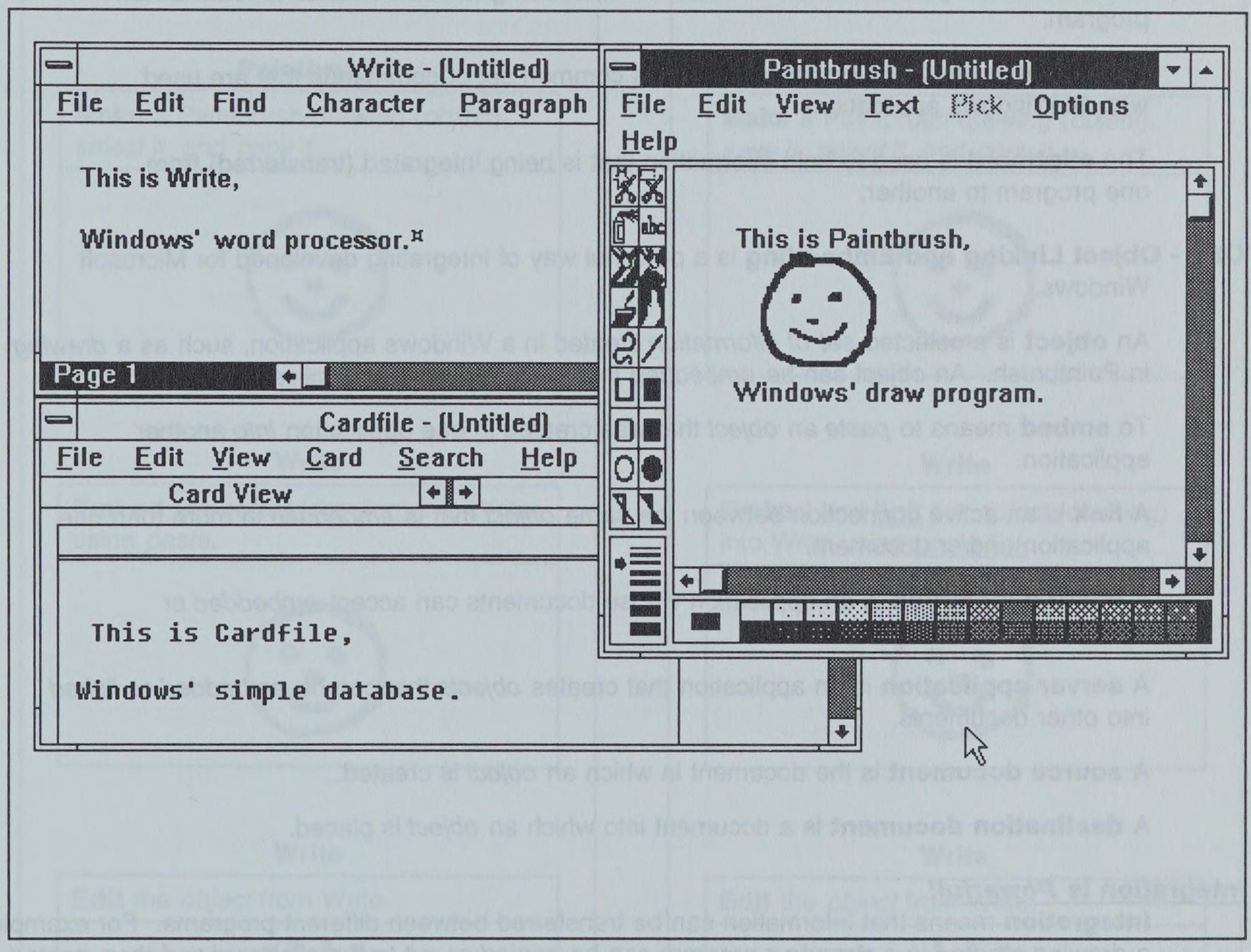
If you are working in **standard mode** (and sometimes in **386 enhanced mode**), when you switch programs, the program you leave is suspended (exactly as you leave it) while you work with the program you switched into. This is one form of **multitasking**.

A more powerful form of **multitasking** can be accessed when using the **386 enhanced mode**. The computer can *process a time-consuming task* in one program (such as sorting a database) *while you work in another program*. The **standard mode** cannot access this form of multitasking.

View more than one program at once.

When multitasking, it is sometimes useful to size and arrange the application windows so you can view more than one application at a time.

Multitasking



This desktop is arranged to show three *application windows* that are all in the computer's memory at once. Paintbrush is the *active* program as indicated by the highlighted title bar.

Notice the title bar, menu bar, and control box for each window.

TOPIC 16
Windows Integration

☞ *Do Worksheet 15 on page 182*

Integration means
1) that *information* can be easily *transferred* between different programs, and
2) that different programs look and behave alike, reducing the time it takes to learn a new program.

CUA - Common User Access refers to a common set of commands that are used with all Windows applications.

The **clipboard** is used to hold information that is being integrated (transferred) from one program to another.

OLE - Object Linking and Embedding is a powerful way of integrating developed for Microsoft Windows.

An **object** is a selected *set of information* created in a Windows application, such as a *drawing* in Paintbrush. An object can be *embedded in* or *linked to* another application.

To **embed** means to *paste* an *object* that was created in one application *into* another application.

A **link** is an active connection between the same *object* that is *embedded* in more than one application and/or document.

A **client application** is an application whose documents can accept *embedded* or *linked objects*.

A **server application** is an application that creates *objects* that can be *embedded* or *linked* into other documents.

A **source document** is the document in which an *object* is created.

A **destination document** is a document into which an *object* is placed.

Integration is *Powerful!*

Integration means that information can be transferred between different programs. For example, a drawing created in a **drawing** program can be *copied or cut to the clipboard* and then *pasted from the clipboard* into a **word processing** program.

Using simple integration, if you want to change (edit) a drawing in the word processor, you have to:

- delete the drawing from the word processor,
- go back into the drawing program and edit or re-draw the original drawing, and
- copy the picture from the **drawing** document back into the **word processing** document again.

Object Embedding is *More Powerful!*

Object embedding is a way to copy an *object* from a *source program* (for example, Paintbrush) into a *destination program* (for example, Write) so that it can be edited directly from the *destination program* (for example, you can edit a drawing from the word processor).

Object Linking is *Most Powerful!*

Object linking connects an *object* that has been copied from a *source document* and **embedded** in one or more *destination documents* so that when the *object* is *edited* in the source document, all the destination documents are also *edited*.

(OLE) Object Linking and Embedding

Embedding

Paintbrush

Make a Paintbrush drawing (*object*), *select* it, and *copy* it.

Write

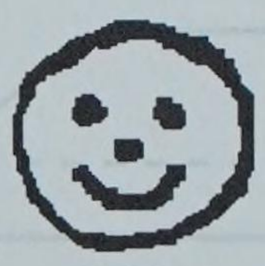
Embed the *object* (drawing) into Write using *paste*.

Write

Edit the *object* from Write.

Paintbrush

The Paintbrush *object* **does not change.**



Linking

Paintbrush

Make a Paintbrush drawing (*object*), *save* it, *select* it, and *copy* it.

Write

Embed and **link** the *object* (drawing) into Write using *paste link*.

Write

Edit the *object* from Write.

Paintbrush

The Paintbrush *object* **also changes**.

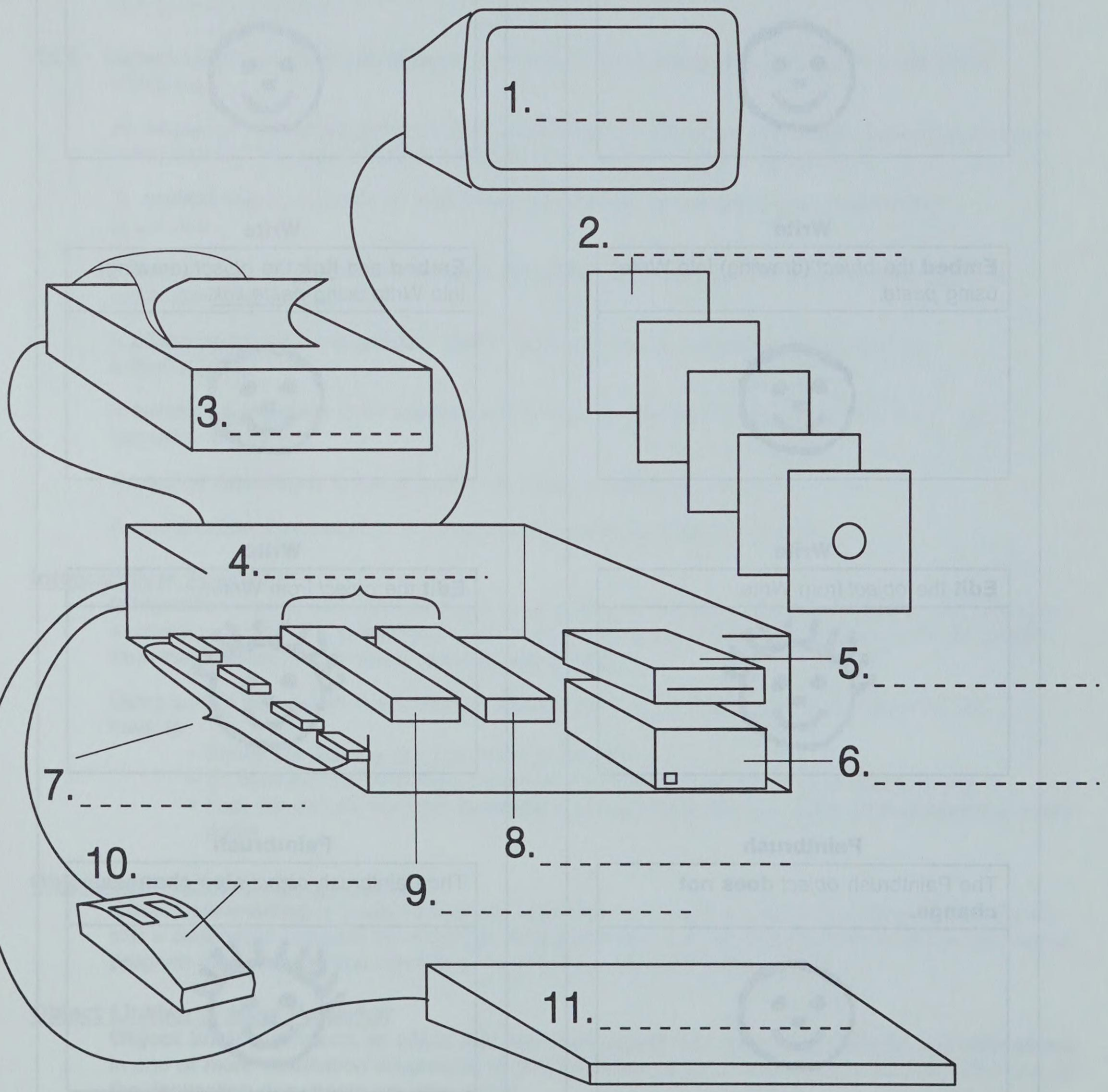
WORKSHEET 1

THE COMPUTER SYSTEM, HARDWARE

NAME _____

DIRECTIONS: Use the following terms to fill in the name of each piece of hardware shown below:

chips	floppy disks	keyboard	mouse
computer	hard disk	memory	floppy disk drive
processor	monitor	printer	



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WORKSHEET 2

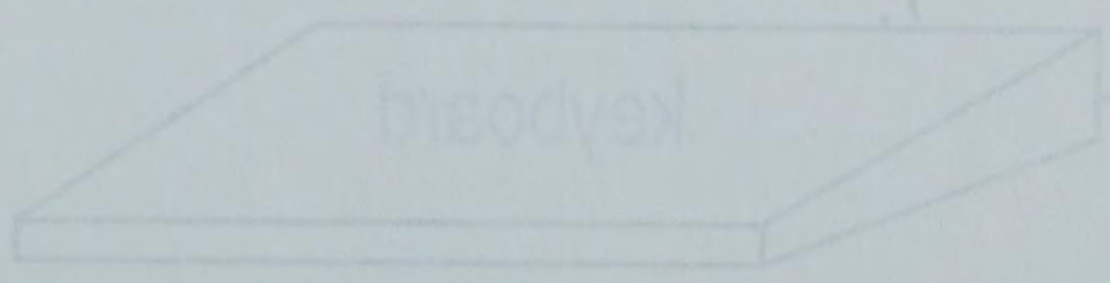
THE COMPUTER SYSTEM, HARDWARE

NAME _____

DIRECTIONS: Use the following terms to fill in the blanks below:

chips	floppy disks	keyboard	mouse
computer	hard disk	memory	printer
disk drive	hardware	monitor	processor

1. What is an electronic device that performs complex tasks at high speed and with great accuracy? It has two main parts, the **processor** and the **memory**.
   1) _____
2. What are the small pieces of silicon wafers which often hold instructions to perform behind-the-scenes tasks, making it possible for you to use the computer?
   2) _____
3. What is the group of parts that make up the computer system and that can be seen and touched?
   3) _____
4. What is the small, hand-held device used to control a pointer on the screen?
   4) _____
5. What do you call the large capacity, permanent storage area that offers fast access to the information stored on it?
   5) _____
6. What do you call the area of the computer that holds instructions (programs) and information you give it, and forgets everything when the computer is turned off?
   6) _____
7. What device transfers information from the computer to paper?
   7) _____
8. What is the device that transfers information back and forth between the computer and a disk?
   8) _____
9. What do you call the magnetically coated disks on which information (both programs and data typed from the keyboard) can be stored and retrieved?
   9) _____
10. What is the "brains" of the computer?
    10) _____
11. What is the screen that displays the information in the computer?
    11) _____
12. What is used to enter data into and issue commands to the computer?
    12) _____



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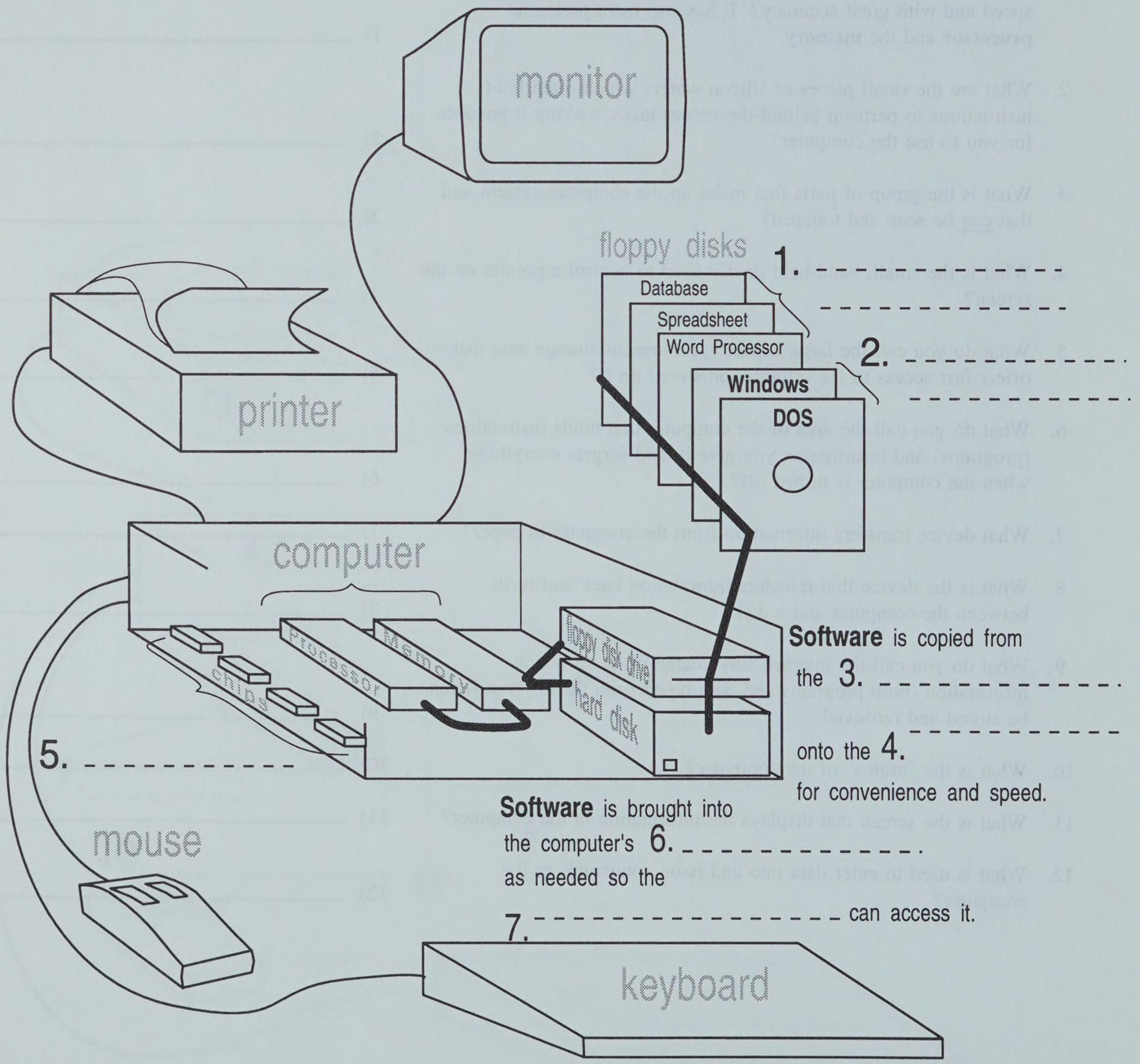
WORKSHEET 3

THE COMPUTER SYSTEM, SOFTWARE

NAME _____

DIRECTIONS: Use the following terms to identify the different types of software and to identify the places software travels:

firmware	hard disk	floppy disks	application software
memory	processor	system software	



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WORKSHEET 4

THE COMPUTER SYSTEM, SOFTWARE

NAME _____

DIRECTIONS: Use the following terms to fill in the blanks below. Some terms are used more than once.

software	system software	application software
program	Microsoft Windows	DOS - disk operating system
firmware		

1. What do you call the *set of instructions* that tells the computer what to do, is often stored on disks, and cannot be seen or touched? 1) _____

2. What are the two main kinds of **software**? 2) a. _____

   b. _____

3. What are two kinds of **system software**? 3) a. _____

   b. _____

4. What kind of **software** runs the computer system (communicates between the parts that make up the computer system)? 4) _____

5. What kind of ***system software*** is built into the computer system on chips? 5) _____

6. What kind of ***system software*** comes on disks and acts as a link between *application software* and the system's hardware? 6) _____

7. What kind of **software** does a specific task, such as word processing? 7) _____

8. What is the special kind of *software* that provides a *graphics environment*, that is, an *icon-based* **link** between you, application software, and DOS? 8) _____

9. What word means the same thing as "application"? 9) _____

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WORKSHEET 5

NAME _____

ABOUT WINDOWS, WINDOWS ASPECTS, and THREE BASIC PARTS OF WINDOWS

DIRECTIONS: Use the following terms to fill in the blanks below.

windows	multitasking	Program Manager
desktop	application	OLE - object linking and embedding
document	icons	GUI - graphical user interface

1. What commonly used phrase means that Windows has pictures that you use to communicate with the computer? 1) _____

2. What Windows program provides an easy way to organize and start programs? 2) _____

3. What is it called when you run more than one program at a time? 3) _____

4. What does Windows call its powerful way to transfer information between programs? 4) _____

5. What are the small pictures that represent various elements in Windows? 5) _____

6. What are the rectangular work areas for tasks, applications, or documents? 6) _____

7. What kind of a window holds programs and has a menu bar? 7) _____

8. What kind of a window is inside an application window and has no menu bar? 8) _____

9. What is the background (screen) upon which windows and icons appear called? 9) _____

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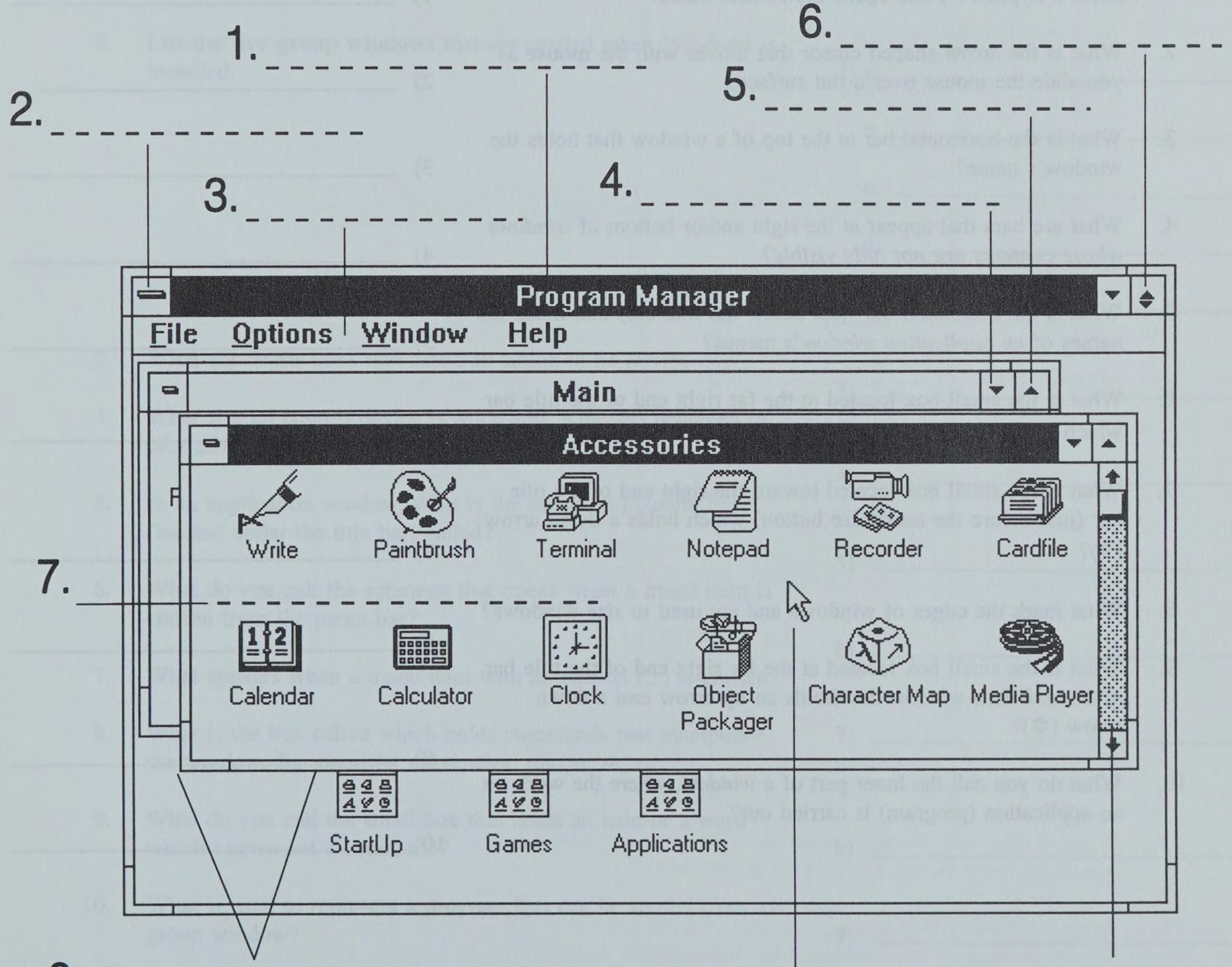
WORKSHEET 6

WINDOWS ELEMENTS

NAME _____

DIRECTIONS: Use the following terms to fill in the blanks below:

menu bar	maximize button	control box	window borders and corners
title bar	minimize button	workspace	
scroll bar	restore button	pointer	



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WORKSHEET 7

WINDOWS ELEMENTS

NAME _____

DIRECTIONS: Use the following terms to fill in the blanks below:

menu bar	maximize button	control box	window borders and corners
title bar	minimize button	workspace	
scroll bars	restore button	pointer	

1. What do you call the box at the left end of the title bar which holds a hyphen (-) and opens the control menu?
   1) _____

2. What is the arrow-shaped cursor that moves with the **mouse** as you slide the mouse over a flat surface?
   2) _____

3. What is the horizontal bar at the top of a window that holds the window's name?
   3) _____

4. What are bars that appear at the right and/or bottom of *windows whose contents are not fully visible*?
   4) _____

5. What is the horizontal bar (just below the title bar) that holds the names of an *application window's* menus?
   5) _____

6. What is the small box located at the far right end of the title bar which holds an up arrow (▲)?
   6) _____

7. What is the small box located toward the right end of the title bar (just before the maximize button) which holds a down arrow (▼)?
   7) _____

8. What mark the edges of windows and are used to *size* windows?
   8) _____

9. What is the small box located at the far right end of the title bar *of a maximized window* that holds an up arrow *and* a down arrow (⬍)?
   9) _____

10. What do you call the inner part of a *window*, where the work on an application (program) is carried out?
    10) _____

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WORKSHEET 8

NAME _____

WINDOWS ORGANIZATION and CONTROLLING WINDOWS

DIRECTIONS: Use the following terms to fill in the blanks below:

mouse	control box	Program Manager	accessories
default	dialog box	drop-down menu	dimmed command
menu bar	program icon	command button	application
main	startup	games	commands

1. What Microsoft Windows program organizes applications into groups and lets you start applications?

1) _____

2. List the five **group windows** that are created when Windows is installed.

2) a. _____

b. _____

c. _____

d. _____

e. _____

3. What are instructions that cause an action to be carried out?

3) _____

4. What special control device is Microsoft Windows designed to take advantage of?

4) _____

5. In an application window, what is the second horizontal bar (located under the title bar) called?

5) _____

6. What do you call the submenu that opens when a menu item is chosen from the menu bar?

6) _____

7. What appears when a menu item with an ellipsis (...) is chosen?

7) _____

8. What is the box called which holds commands that manipulate the window; for example, move, size, maximize, etc.?

8) _____

9. What do you call the small box that holds an icon or a word which carries out a command?

9) _____

10. What is used to represent a program that can be started from a group window?

10) _____

11. What kind of command is shown in gray and cannot be used in the current situation?

11) _____

12. What is an *automatic setting* in a program called?

12) _____

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WORKSHEET 9

NAME _____

THE MOUSE, THE POINTER and THE KEYBOARD

DIRECTIONS: Use the following terms to fill in the blanks below:

click	ESC	pointer	control keys	shortcut keys
comma	mouse	plus (+)	double-click	Alt, Shift, Ctrl
drag	F1	keyboard	function keys	

1. What is the small, hand-held device used to control the pointer on the screen? 1) _____

2. What mouse action are you using when you
   1) move the pointer on an item, and
   2) quickly press and release the left button? 2) _____

3. What mouse action are you using when you
   1) move the pointer on an item, and 2) quickly press and release the left mouse button *twice*? 3) _____

4. What mouse action are you using when you
   1) move the pointer on an item,
   2) hold down the left button,
   3) slide the mouse to a new location, and
   4) then release the left button? 4) _____

5. What is the arrow on the screen which moves with the *mouse*? 5) _____

6. What device is used to enter data into the computer and to issue commands to the computer? 6) _____

7. What are two kinds of keys that are used to issue commands from the keyboard? 7) a. _____

   b. _____

8. What are the *control keys*? 8) _____

9. What do you call *key combinations* that are used to activate certain commands without using the menu? 9) _____

10. When instructions are given to use *two keys together* to issue a command, what sign is shown between the keys? 10) _____

11. When instructions are given to use two or more *keys in succession* to issue a command, what separates the keys? 11) _____

12. What key is used to back out of situations? 12) _____

13. What function key is used to get Help? 13) _____

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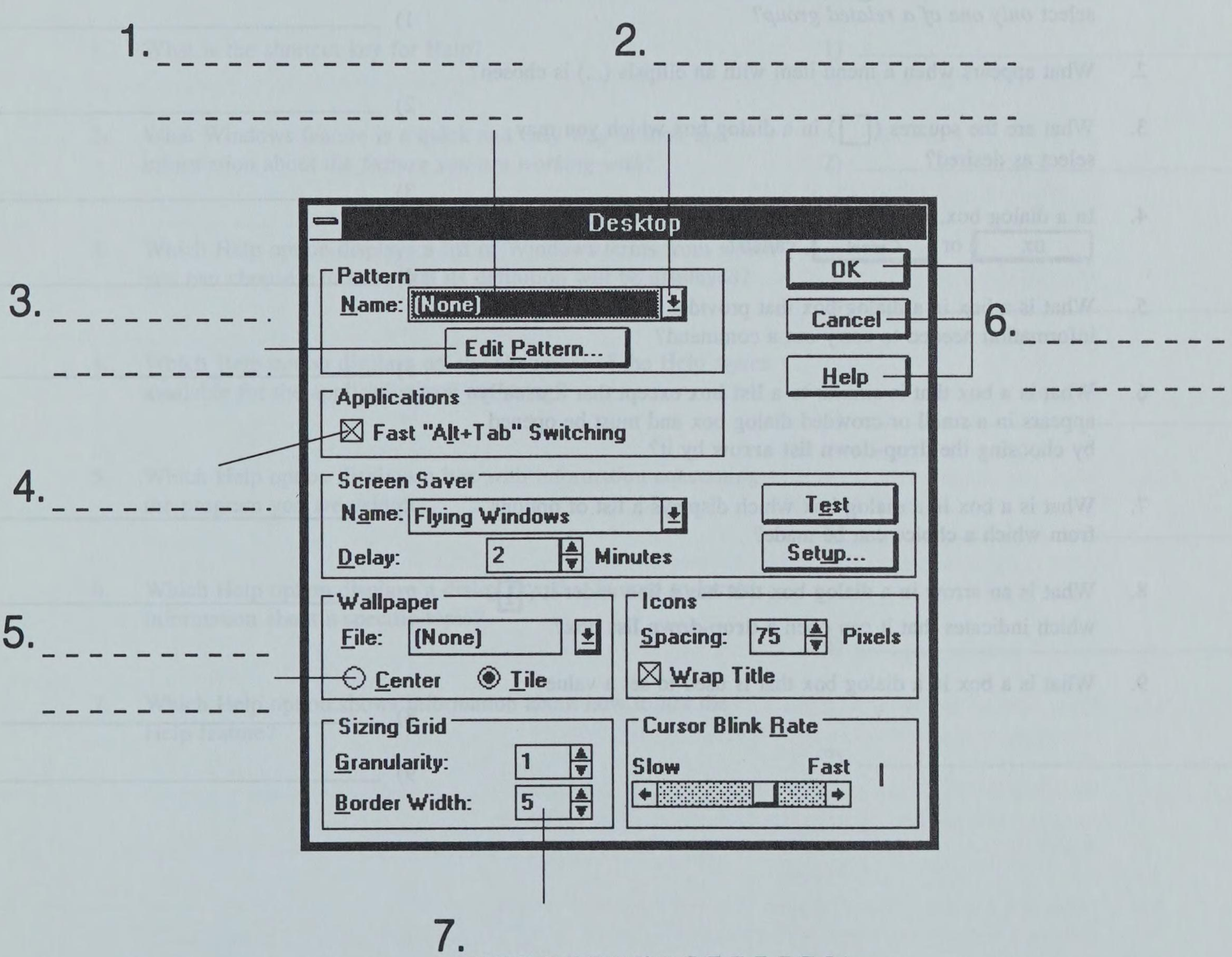
WORKSHEET 10

DIALOG BOXES

NAME _____

DIRECTIONS: Use the following terms to fill in the blanks below:

option buttons	check box	drop-down list box
command button	increment box	drop-down list arrow
command with an ellipsis		



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WORKSHEET 11

DIALOG BOXES

NAME _____

DIRECTIONS: Use the following terms to fill in the blanks below:

option buttons	check boxes	drop-down list box
command button	text box	drop-down list arrow
dialog box	list box	increment box

1. What are the circles (◯) in a dialog box from which you may select *only one of a related group*?

1) _____

2. What appears when a menu item with an ellipsis (...) is chosen?

2) _____

3. What are the squares (☐) in a dialog box which you may select as desired?

3) _____

4. In a dialog box, what is a box that carries out an action, such as OK or Cancel, called?

4) _____

5. What is a box in a dialog box that provides space for typing information needed to carry out a command?

5) _____

6. What is a box that is similar to a **list box** except that it usually appears in a small or crowded dialog box and must be opened by choosing the **drop-down list arrow** by it?

6) _____

7. What is a box in a dialog box which displays a list of options from which a choice can be made?

7) _____

8. What is an arrow in a dialog box that has a line under it (⬇) which indicates that it can open a **drop-down list box**?

8) _____

9. What is a box in a dialog box that is used to set a value?

9) _____

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WORKSHEET 12

HELP

NAME _____

DIRECTIONS: Use the following terms to fill in the blanks below.

Contents	Glossary	About (application)
F1	How to Use Help	
Help	Search for Help On	

1. What is the shortcut key for Help?

   1) _____

2. What Windows feature is a quick and easy way to look up information about the *feature you are working with*?

   2) _____

3. Which Help option displays a list of Windows terms from which you can choose a term so that its definition will be displayed?

   3) _____

4. Which Help option displays an alphabetic list of the Help *topics* available for the application you are using?

   4) _____

5. Which Help option displays a box with information concerning the program you are using?

   5) _____

6. Which Help option displays a dialog box that is used to locate information about a specific topic?

   6) _____

7. Which Help option shows information about how to *use* the Help feature?

   7) _____

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WORKSHEET 13

FILE MANAGER

NAME _____

DIRECTIONS: Use the following terms to fill in the blanks below. One term is used more than once.

file	data file	program file	directory tree	current directory
filename	directory	File Manager	filename extension	
associated file	subdirectory	root directory	directory window	

1. What kind of window displays *directories* on the left side and *files* on the right side? 1) _____

2. What program is used to control your files? 2) _____

3. What is the top-level directory? 3) _____

4. What part of the disk structure holds the *files* that are saved on a disk? 4) _____

5. What is a directory that is within another directory? 5) _____

6. What is the directory you are working in? 6) _____

7. What do you call a display of the directory structure (directories and subdirectories) on your disk? 7) _____

8. What is a window within the File Manager that displays the *directory* and *files* on your disk? 8) _____

9. What is the optional "period and up to three characters" at the end of a *filename* called? 9) _____

10. What is a *set of data* that is saved on a disk as a named unit? 10) _____

11. What kind of file has a filename extension which identifies it as belonging to a certain application, such as Write (.WRI)? 11) _____

12. What kind of file holds a *set of instructions* that does a task, such as word processing, and ends with .EXE, .PIF, .COM, or .BAT? 12) _____

13. What is a file that consists of *data that is created in a program*, such as a letter typed into a word processor? 13) _____

14. What is the name you assign to a *set of data* that you save on a disk? 14) _____

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WORKSHEET 14

WINDOWS MODES and MULTITASKING

NAME _____

DIRECTIONS: Use the following terms to fill in the blanks below. Two terms are used more than once.

1,000	1,000,000	extended memory	microprocessor chip
1	multitasking	memory managing	conventional memory
memory	standard mode	complex programs	386 enhanced mode
			graphics environment

1. About how many characters will one kilobyte (K) hold? 1) _____

2. What is general purpose memory above conventional and upper memory? 2) _____

3. What part of the computer determines the computer's *size* as measured in bytes? 3) _____

4. What Windows **mode** requires a computer with a 386 or higher processor to run? 4) _____

5. How many characters will one byte hold? 5) _____

6. What part of the computer determines its *speed*? 6) _____

7. What is the first 640K of memory? 7) _____

8. List three factors that require computers with fast processors and large memories. 8) a. _____

b. _____

c. _____

9. About how many characters will one megabyte (Mb) hold? 9) _____

10. What Windows **mode** will run on a computer with a 286 processor and at least 256K of extended memory? 10) _____

11. What is the ability to run more than one program at a time called? 11) _____

12. What kind of programs organizes the computer's memory so that different programs do not use the same memory at the same time? 12) _____

13. What Windows **mode** will perform the most powerful form of multitasking, whereby the computer can process a time-consuming task while you work on another program? 13) _____

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WORKSHEET 15

WINDOWS INTEGRATION

NAME _____

DIRECTIONS: Use the following terms to fill in the blanks below. One term is used more than once.

server application	embed	clipboard	destination document
client application	link	integration	CUA - common user access
	object	source document	OLE - object linking and embedding

1. What is the *common set of commands* that is used with all Windows applications? 1) _____

2. What word refers to the fact that a group of different programs look and behave alike? 2) _____

3. What is the powerful way of integrating that Microsoft Windows developed? 3) _____

4. What is the active connector between the same *object* that is *embedded* in more than one document? 4) _____

5. What word means to *paste* an *object* that was created in a source document into a destination document? 5) _____

6. What is the process whereby information can be easily transferred between different programs? 6) _____

7. What is a selected *set of information* created in a Windows application, such as a *drawing* in Paintbrush? 7) _____

8. What is the document in which an *object* is created? 8) _____

9. What is used to hold information that is being integrated (transferred) from one program to another? 9) _____

10. What is the document into which an *object* is placed? 10) _____

11. What kind of application has documents that can accept embedded or linked objects? 11) _____

12. What kind of application can create objects that can be embedded or linked into other documents? 12) _____

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WINDOWS Lesson Two
Windows Basics

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EXERCISE 1
Start Windows

Exercises 1 and 2 should be done during the same session.

ASSUMPTION:

It is assumed that Windows 3.1 has been installed correctly on your computer system.

start Windows
To begin Microsoft Windows from a DOS prompt, and (for some systems) by turning the computer on.

window
The rectangular work area for a task, program, document, or Windows group. There are several kinds of windows: application, document, group, and dialog.

icon
A small picture that represents an element such as a document, program, group of programs, command, or the pointer.

desktop
The background (screen) upon which **windows** and **icons** appear.

title bar
The horizontal bar at the top of a window that holds the window's name.

control box (Control-menu box)
The box at the left end of the title bar which opens the Control menu.

control menu
A menu that you can use to manipulate a window. It contains commands such as restore, move, size, maximize, minimize, close, and open.

IMPORTANT: The "Starting Windows Screen" (below) is the "starting point" for the exercises in this book. See Save Desktop Arrangement (page 218) and Create 'Starting Windows Screen' (page 221) for help in changing your screen to match the one below.

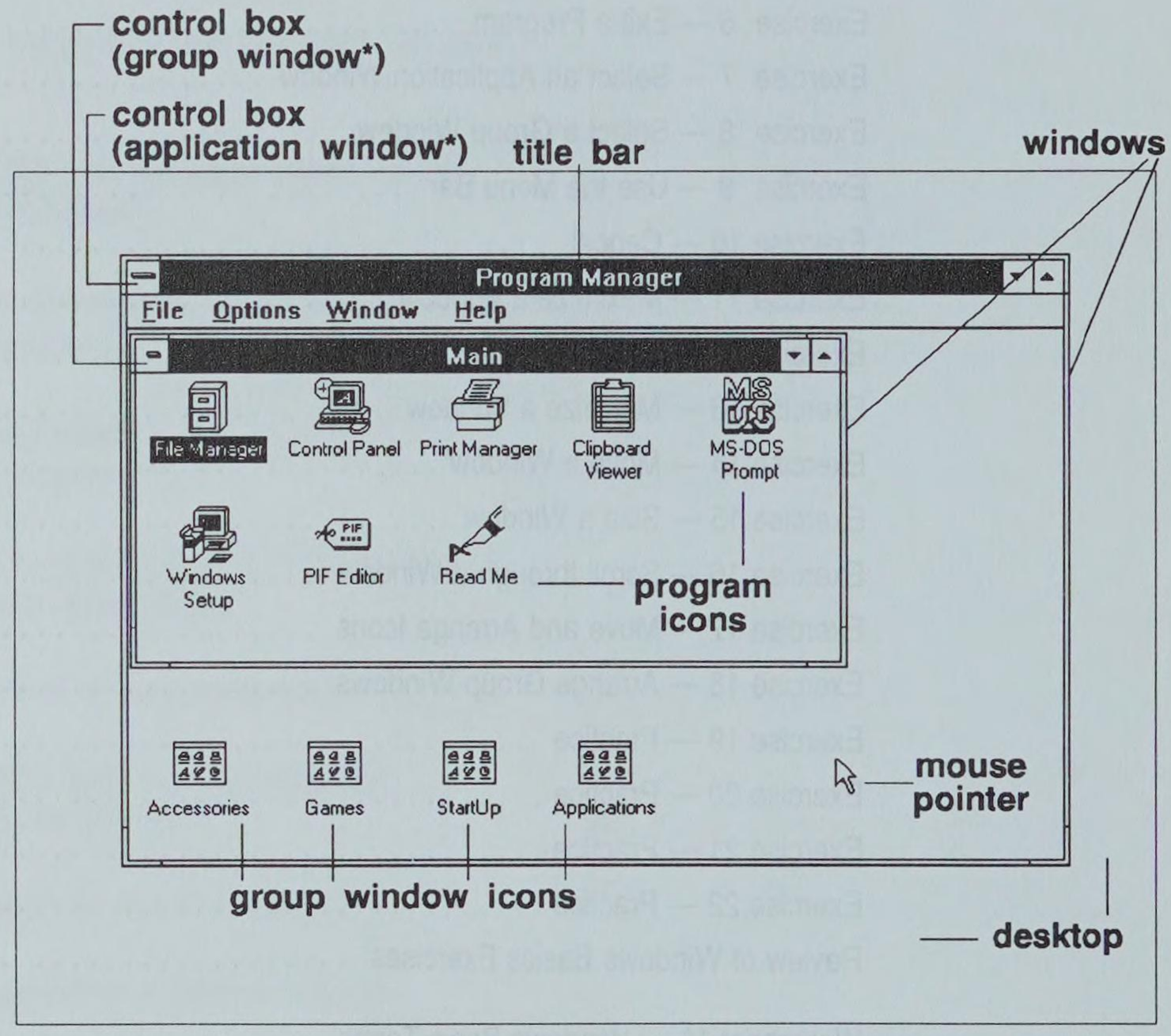
Before you start these exercises, you may want to read
Appendix C: Reproduce Your Original Windows Desktop and
Appendix B: Rebuild Group Windows.

1. Turn on the monitor and computer.

STOP HERE IF WINDOWS APPEARS ON YOUR SCREEN.

2. FROM THE DOS PROMPT (C:\>):
   - **Type** W I N.
   - **Press** ↵.

The *Starting Windows screen* appears:



NOTE:* *The control box for **application and **dialog** windows holds a "spacebar" icon (longer), while the control box for **group** and **document** windows holds a "hyphen" icon (shorter).*

YOUR SCREEN MAY NOT MATCH THE ONE ABOVE.

After Microsoft Windows is installed, the first time it is started the screen is arranged like the one above. But with just a few clicks of the mouse, the opening screen can be changed, and when you **exit** Windows, these changes may be saved, leaving you with the new desktop arrangement when you start Windows again.

If you have upgraded to Windows 3.1 from Windows 3.0, your screen may have slight differences from the screen shown above.

Go on to Exercise 2

IMPORTANT: When clicking the mouse button, always use the left mouse button unless otherwise instructed.

IMPORTANT: Whenever you see dotted boxes with "OR" between them, you should follow the directions in only one of the boxes. The "OR" boxes have instructions for different ways to perform the same action.

FROM THE *STARTING WINDOWS* SCREEN:

1

- **Double-click** on the **Program Manager's** ▭ (Control box).
  NOTE: The "double-click" procedure may take some practice. If you accidentally get a menu that you do not want, move the pointer to the desktop and click it once to cancel the menu. Then try again.

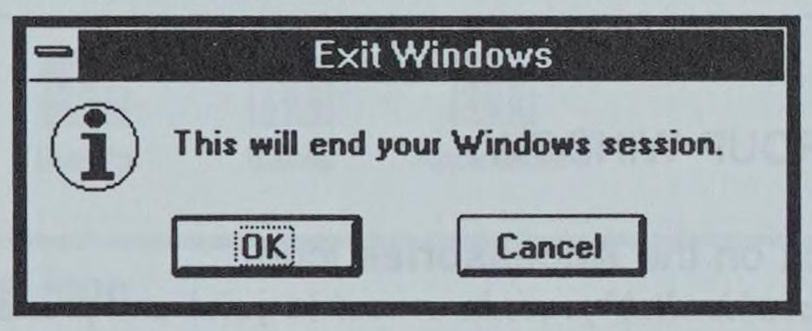
OR

- **Click** on **File**.
- **Click** on **Exit Windows...** .

OR

- **Press** Alt + F4.
  (Shortcut keys to exit an application window.)

The *Exit Windows* dialog box appears:



2

- **Click** on OK.

OR

- **Press** ↵.

A screen with just the DOS prompt appears:

C:\>

IMPORTANT:

Always EXIT Windows before turning off your computer system.

EXERCISE 2
Exit Windows

Continue from Exercise 1, doing both during the same session.

exit Windows
To leave Microsoft Windows and return the computer to a DOS prompt.

click (mouse action)
1. Move the pointer on the desired item.
2. Quickly press and release the left mouse button.

double-click (mouse action)
1. Move the pointer on the desired item.
2. Quickly press and release the left mouse button twice.

dialog box
A box which appears when a menu item with an ellipsis (...) is chosen. A dialog box requests additional information before performing the original command.

Keyboard Users

EXIT WINDOWS

WITH THE PROGRAM MANAGER'S TITLE BAR HIGHLIGHTED:

- **Press** Alt + F4
  (shortcut keys)
- **Press** ↵

OR

- **Press** Alt + F
  (to access File option)
- **Press** X (Exit)
- **Press** ↵

OR

- **Press** Alt + Space
  (to open control box)
- **Press** C (Close)
- **Press** ↵

EXERCISE 3
Open a Group Window

Exercises 3 and 4 should be done during the same session.

open a group window
To enlarge a *group window* icon to a window. An opened group window displays icons that represent programs.

group windows
Windows within the Program Manager window which hold "groups" of program- item icons. Group windows are a special kind of document window which belong to the Program Manager and cannot be moved outside of the Program Manager window.

group window icons
Icons at the bottom of the Program Manager window which represent *group windows*.

workspace
The inner part of a window, where the work on an application is done.

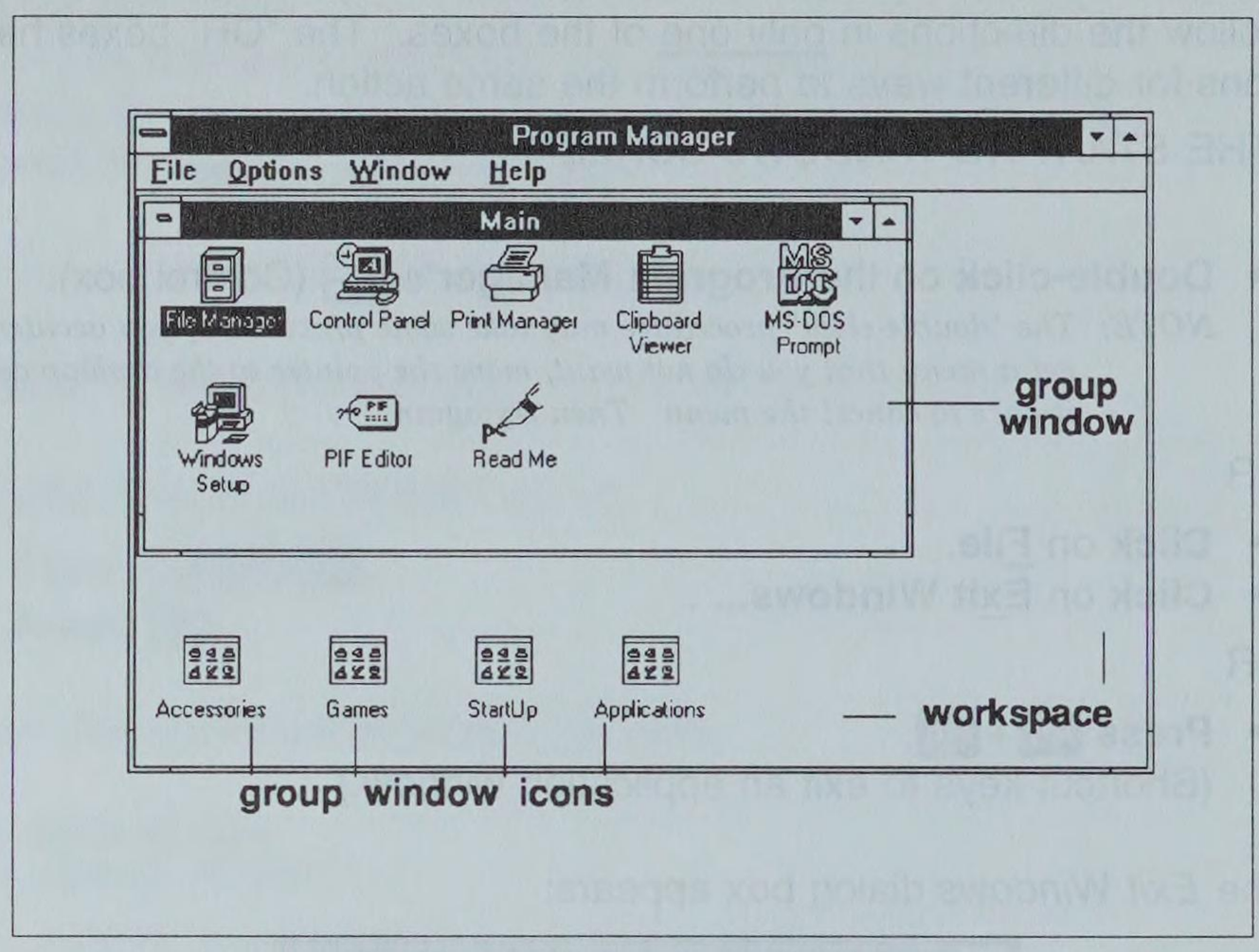
Keyboard Users

OPEN A GROUP WINDOW

1. **Press** and **hold** Ctrl while **pressing** and **releasing** Tab until the desired *group window icon name* is highlighted.
2. **Press** ↵

❶ **Start Windows** (review, page 184, step 2).

Starting Windows Screen



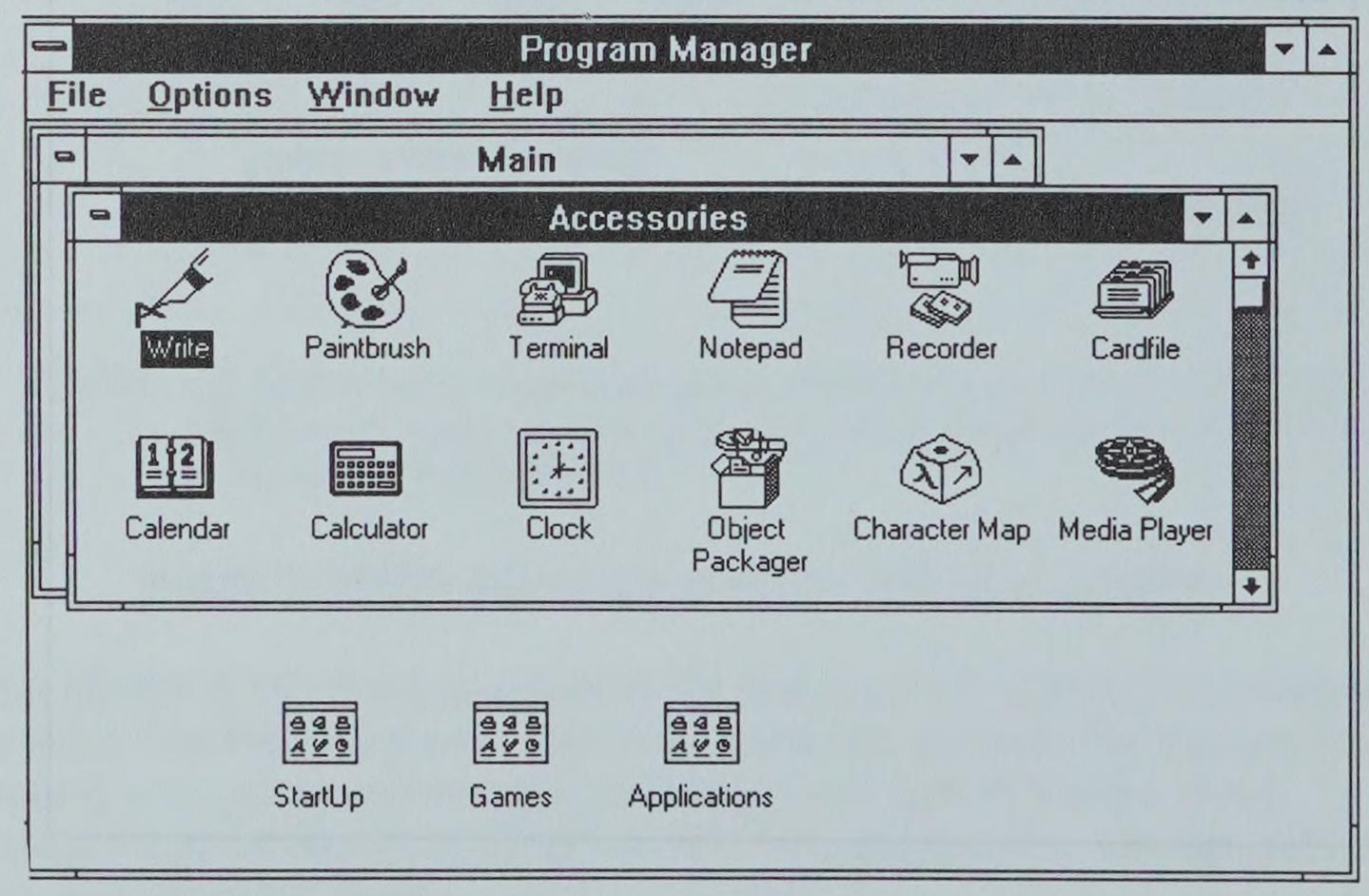
❷ TO OPEN A GROUP WINDOW:

- **Double-click** on the **Accessories** icon.
  NOTE: The "double-click" procedure must be quick and precise, otherwise you may accidently "move" the icon or get the "pop-up" menu. If you do accidently get the "pop-up" menu, move the cursor off the icon and click the mouse to collapse the "pop-up" menu. Try the procedure again.

OR

- **Click** on the **Accessories** icon (a menu pops up).
- **Click** on **Restore**.

Program Manager Window with Accessories Window Opened



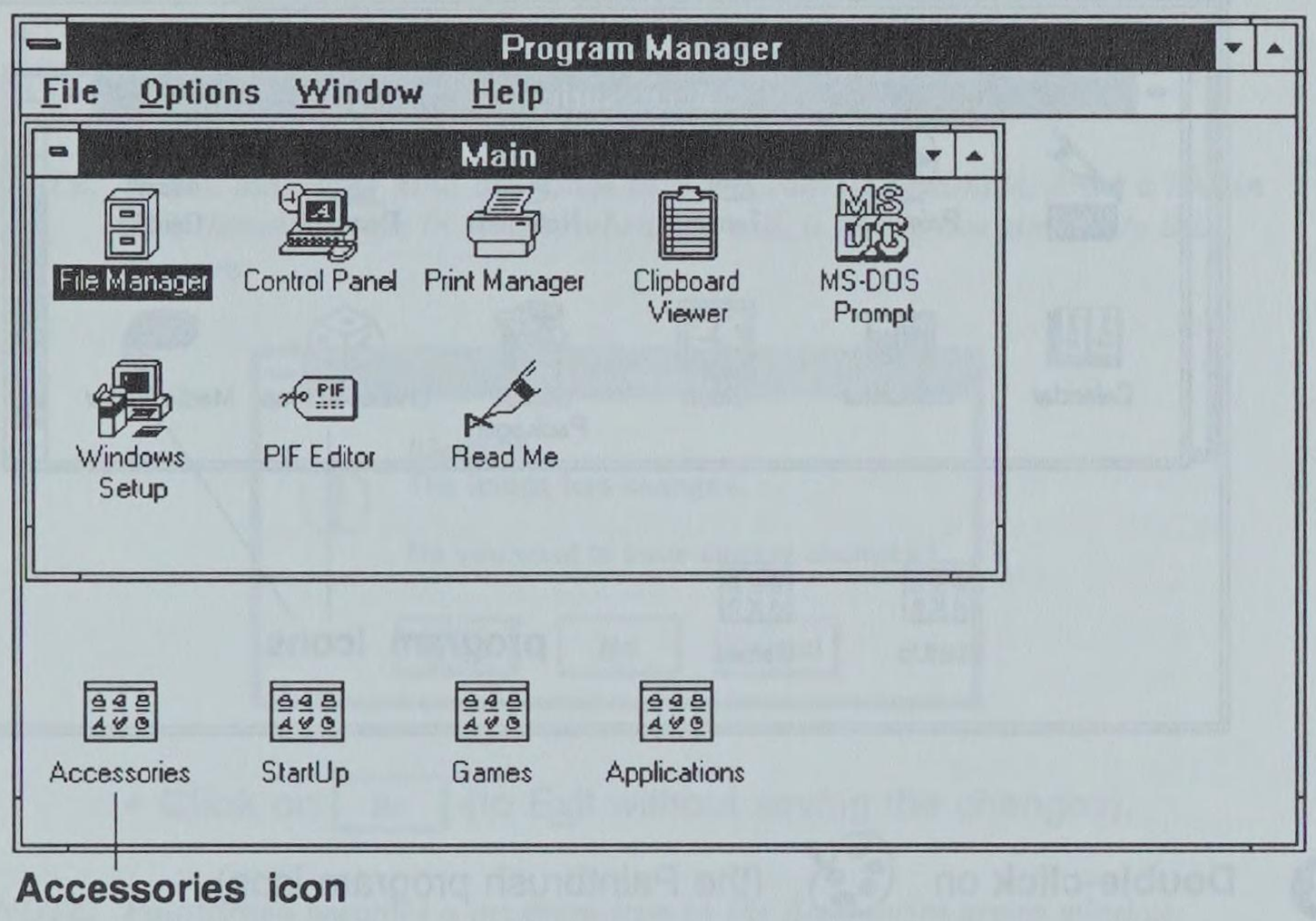
Go on to Exercise 4

1. • **Double-click** on ▭, the Control box for the **Accessories** window.

OR

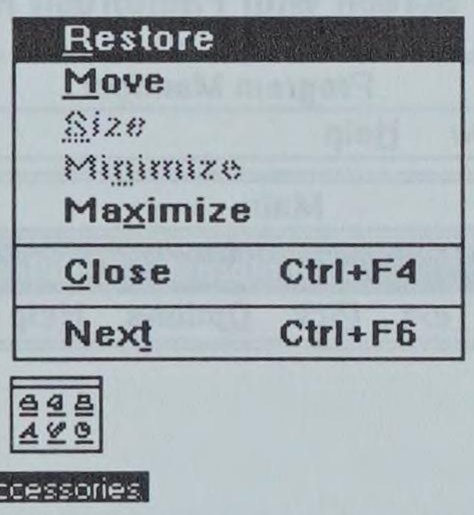
• **Click** on ▭, the Control box for the **Accessories** window.
• **Click** on **Close**.

Program Manager Window with Accessories Window Reduced to an Icon



Accessories icon

2. **Click** once on the **Accessories** icon.
A *pop-up* menu appears:



3. OOPS! You do not really want to open the Accessories window.
• **Click** anywhere outside the **pop-up menu** (to close the menu).
NOTE: Alt *or* Esc *also closes a menu.*

4. **Open** the **Applications** group window.

5. **Close** the **Applications** group window.

6. **Open** the **Games** group window.

7. **Close** the **Games** group window.

8. **Exit Windows** (review, page 185).

EXERCISE 4
Close a Group Window

Continue from Exercise 3, doing both during the same session.

close a group window
To reduce a group window to an icon.

click off
To click outside of an area in order to back out of an action.

close a menu
To cancel a menu that has been opened by:
- clicking outside of the menu,
- pressing Alt, or
- pressing Esc.

WARNING: If you accidentally double-click on the title bar instead of the control box, the window will be maximized. Click on ▭ (the restore button) to return the window to its original size.

Keyboard Users

CLOSE A GROUP WINDOW

1. **Press** and **hold** Ctrl while **pressing** and **releasing** Tab until the desired group window's *title bar* is highlighted.
2. • **Press** Ctrl + F4 (shortcut keys to close a window)

OR

• **Press** Alt + –
• **Press** C (Close)

EXERCISE 5
Start a Program

Exercises 5 and 6 should be done during the same session.

start a program
To use Windows to run a program.

program icon
A picture in a *group window* that represents a program (an application).

Keyboard Users

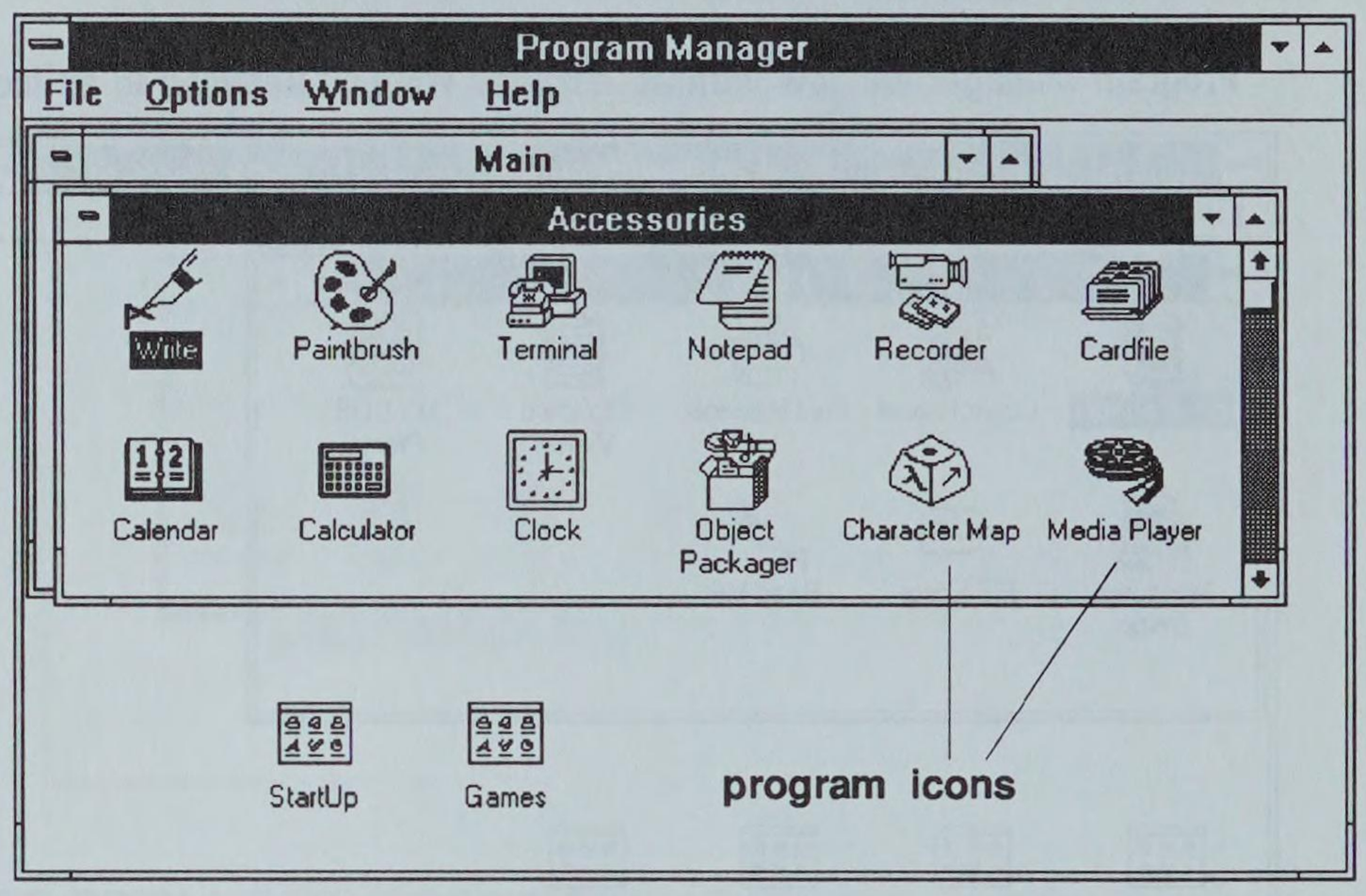
START A PROGRAM

1. To select window:
   Press and **hold** Ctrl while **pressing** and **releasing** Tab until the desired group window's title bar is highlighted, and then release both Tab and Ctrl.
2. **Press** ←, →, ↑, or ↓ until the desired program icon name is highlighted.
3. **Press** ↵

1. **Start Windows** (review, page 184).

2. **Open** the **Accessories** group window (review, page 186).

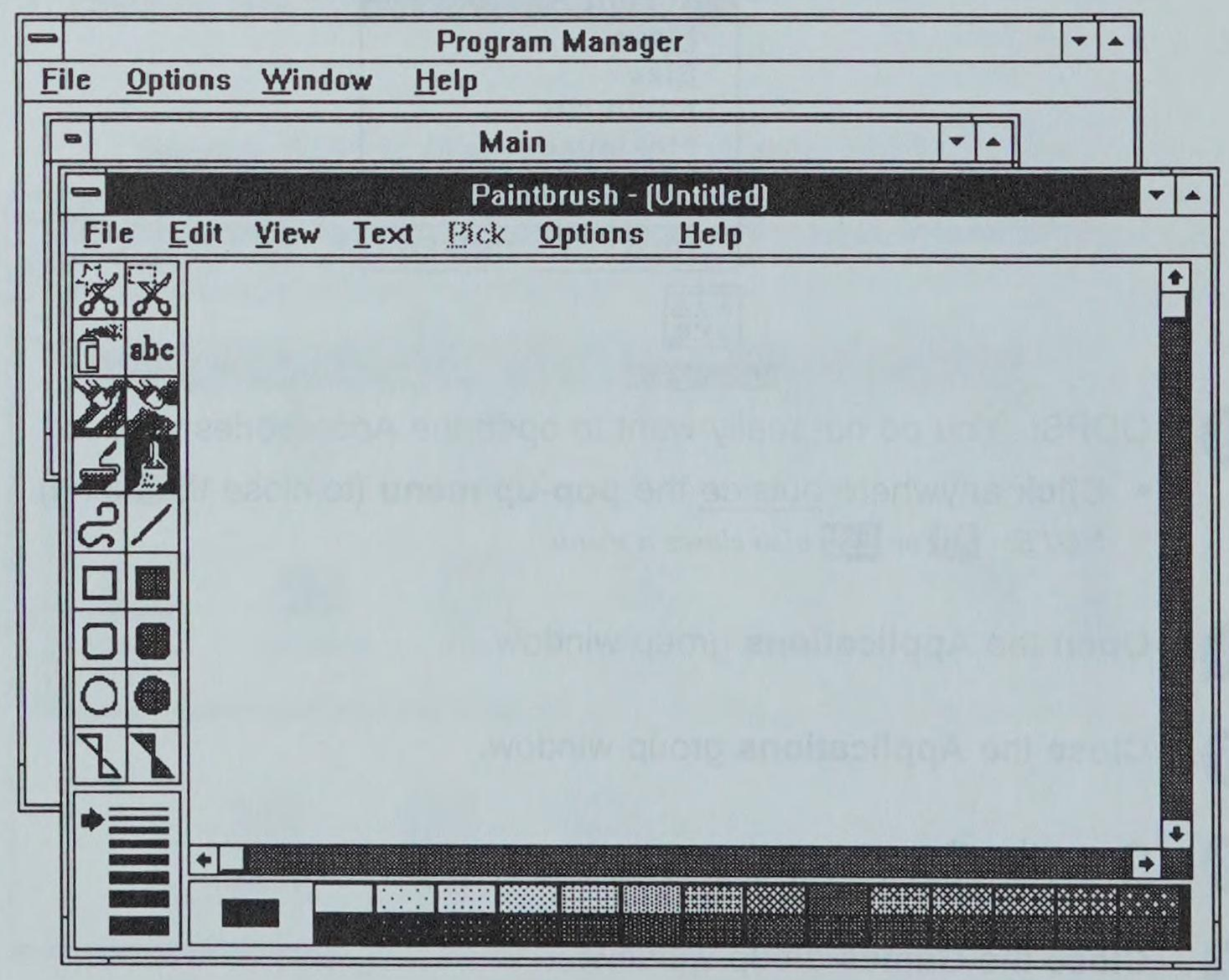
Program Manager Window with Accessories Group Window Opened



3. **Double-click** on (the Paintbrush program icon).
   Paintbrush

   The Paintbrush window opens in front of the existing windows, covering all or part of them.

Screen with Paintbrush Running



NOTE: You can start any program by double-clicking on its icon.

Go on to Exercise 6

FROM THE SCREEN WITH PAINTBRUSH RUNNING:

1. • **Double-click** on the **Paintbrush** window's Control box.

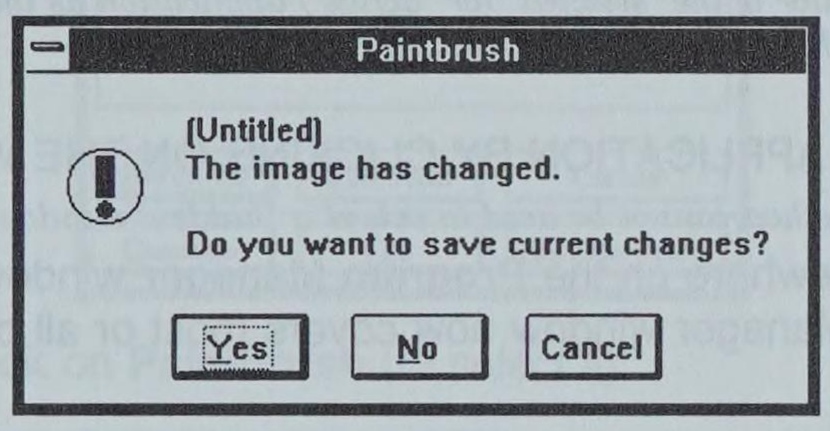
   OR

   • **Click** on the **Paintbrush** window's Control box.
   • **Click** on **Close**.

   OR

   • **Click** on **File**.
   • **Click** on **Exit**.

NOTE: IF you make any kind of change in a program (for example, draw a line in Paintbrush or type in Write), when you exit, a dialog box similar to this appears:



- **Click** on [No] (to Exit without saving the changes).

NOTE: Paintbrush becomes a program icon in the Accessories group window.

2. **Start Write.**
3. **Exit Write.**
4. **Start Clock.**
5. **Exit Clock.**
6. **Start Calendar.**
7. **Exit Calendar.**
8. **Close** the **Accessories** window (review, page 187).
9. **Go** on to Exercise 7.

   OR

   Exit Windows (page 185).

EXERCISE 6
Exit a Program

Continue from Exercise 5, doing both during the same session.

exit a program
To use Windows to leave a program.

NOTE: The term "close" is also used to exit programs. Close is used from the Control box, while Exit is used from the File menu.

Keyboard Users

EXIT A PROGRAM

1. To select window:
   Press and **hold** Ctrl while **pressing** and **releasing** Tab until the desired window's *title bar* is highlighted.
2. • **Press** Alt + F4 (shortcut keys)

   OR

   • **Press** Alt + F (opens File)
   • **Press** X (Exit)

   OR

   • **Press** Alt + Space (opens Control box)
   • **Press** C (Close)

EXERCISE 7
Select an Application Window

Exercises 7 and 8 should be done during the same session.

select an application window
To make an application window active.
A *highlighted title bar* indicates that a window is selected (active).

IMPORTANT: When you select an application window, it moves to the front; the other application windows move to the back. The Program Manager is an application window. Group windows belong to the Program Manager, and they move to the front or back along with the Program Manager window.

application window
A window that holds a program.

active window
The window whose *title bar* is *highlighted* (indicating that it is currently selected).

Three ways to select applications
1. **Click** on window (Step 4).
2. **Rotate application windows** (Step 6).
3. **Use Task List** (Step 11).

Keyboard Users

SELECT AN APPLICATION WINDOW

Rotation Method:

- See step 6.

Task list method:

- **Press** Ctrl + Esc (shortcut keys)

OR

- **Press** Alt + Space
- **Press** W (Switch to...)
- Use ↑ and/or ↓ to highlight the desired application.
- **Press** ↵

IMPORTANT: "Selecting application windows" is one of the most important Windows tasks in this book. "Selecting an application window" is how you switch between different windows, thus permitting multitasking (page 164) and aiding you in finding hidden windows. Please take the time to fully understand the three ways to "select" application windows, and use one of these procedures any time you are asked to "select" an application window.

1. **Start Windows** (page 184), if necessary.

   FROM THE *STARTING WINDOWS* SCREEN:

2. **Open** the **Accessories** group window (review, page 186).

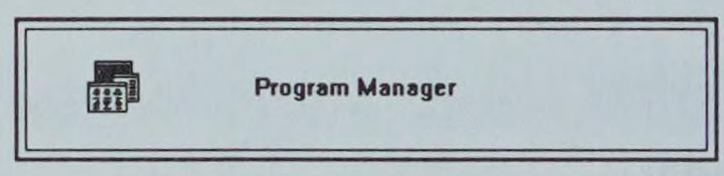
3. **Start Calculator** (review, page 188).
   The *Calculator* window opens in front of the existing windows. Since it is a small window, it partially covers, but does not hide, the other windows.
   NOTE: Calculator is the "selected" (or "active") application as indicated by its highlighted title bar.

4. SELECT AN APPLICATION BY CLICKING ON THE WINDOW:
   *NOTE: This method cannot be used to **select** a "hidden" window.*
   - **Click** somewhere on the **Program Manager** window (to select it). The Program Manager window now covers most or all of the Calculator window.

5. **Start Paintbrush** (review, page 188). Paintbrush opens, covering most or all of the existing windows.
   NOTE: Three application windows are now open; Program Manager, Calculator, and Paintbrush.

6. SELECT AN APPLICATION WINDOW BY ROTATING OPEN APPLICATIONS:
   - **Press** and **hold** Alt while **tapping** Tab and watch the screen while either:

     application names are rotated in a box in the center of the screen.

     OR

     the application *title bars* and/or *icons* are highlighted one after the other.

   - Release both keys when **Program Manager** appears (to select it). Program Manager, and the group windows within it, move to the front.
     *NOTE: This method can be used to **select** any open application, even if the window is hidden or is an active icon.*

7. Use the **rotation** method (step 6) to **select** the **Paintbrush** window. Paintbrush moves to the front.

8. Use the **rotation** method (step 6) to **select** the **Calculator** window.

9. **Exit** the **Calculator** window (review, page 189).

10. Use the **rotation** method (step 6) to **select** the **Program Manager** window.

Continue Exercise 7 on the next page

Exercise 7 (continued)

11 SELECT AN APPLICATION BY USING THE TASK LIST:

- **Double-click** anywhere on the **desktop** (outside all windows).

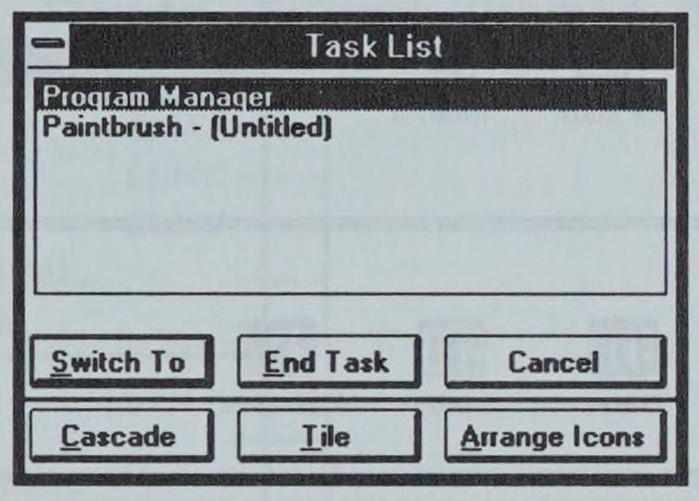
OR

- **Click** on ▭ (in application window), then on **Switch to...** .

OR

- **Press** Ctrl + Esc.

The *Task List* dialog box appears:



- **Double-click** on **Paintbrush** (to select it).

12
- **Exit Paintbrush** (review, page 189).
- **Close** the **Accessories** window (review, page 187).

go on to Exercise 8 below

EXERCISE 8

1 **Open** the **Accessories group window** (review, page 186).
Two group windows should now be open: Main and Accessories.
NOTE: The Accessories group window's title bar is highlighted, indicating it's ***selected****.*

2 SELECT A GROUP WINDOW BY CLICKING ON THE WINDOW:

- **Click on** any part of the "**Main**" group window (to select it).
  NOTE: You cannot select a "hidden" window using this method. If the Main group window is hidden, go on to step 3.

3 SELECT A GROUP WINDOW BY USING THE MENU BAR:

- **Click** on **Windows** (on the menu bar), then on **Games**.
  NOTE: This method can be used to select "hidden" group windows. If a group window is an icon, this method will also open the group window.

4 SELECT A GROUP WINDOW BY ROTATING THEM:

- **Press** and **hold** Ctrl while **tapping** Tab.
  Watch the screen while the **group windows** are selected one after the other by the highlighting of either their *title bar* or their *icon's name*.
- Release both keys when the **Accessories** window is selected.
  NOTE: This method can be used to select "hidden" group windows.

5 **Close** the **Accessories** and **Games** windows (review, page 187).

6
Go on to Exercise 9.

OR

Exit Windows (review, page 185).

EXERCISE 8
Select a Group Window

Continue from Exercise 7, doing both during the same session.

select a group window
To make a group window active. A *highlighted title bar* indicates that a window is selected (active).

group window
A special kind of document window that displays program icons that are used to start programs. Group windows belong to the Program Manager application window and cannot be moved outside the Program Manager window.

document window
A window within an application window. A document window belongs to the application window it is in.

IMPORTANT: As you open many windows, some windows may partially or completely overlap other windows. This may cause a window to become hidden, or it may make a window appear to be within another window when it is really just in front of it. Do not confuse these overlapping windows with document windows.

Three ways to select group windows

1. **Click** on group window (step 2).
2. Use the **Menu bar** (step 3).
3. **Rotate** group windows (step 4).

Keyboard Users

SELECT A GROUP WINDOW

See Exercise 8, step 4.

OR

- **Press** Alt + W (Window)
- **Press** the number of the desired document window.

EXERCISE 9
Use the Menu Bar

use the menu bar
To **select** and **close** a menu from the menu bar, and to **choose** a command from a menu.

menu bar
The bar located under the title bar on application windows that lists the available *menus*. To use a menu command, you first **select** (highlight) and drop down a menu from the menu bar and then **choose** a command from that menu.

close a menu
To back out of a menu without choosing a command.

choose
To pick an item from a menu that initiates an action. (Contrast with *select*, page 194.)

shortcut keys
Key combinations that can be used to activate certain commands instead of using menus.

an ellipsis
Three dots (...) that follow the name of menu items which open a *dialog box* when selected.

menu commands
The options that appear in drop-down menus.

Keyboard Users

SELECT A MENU FROM THE MENU BAR

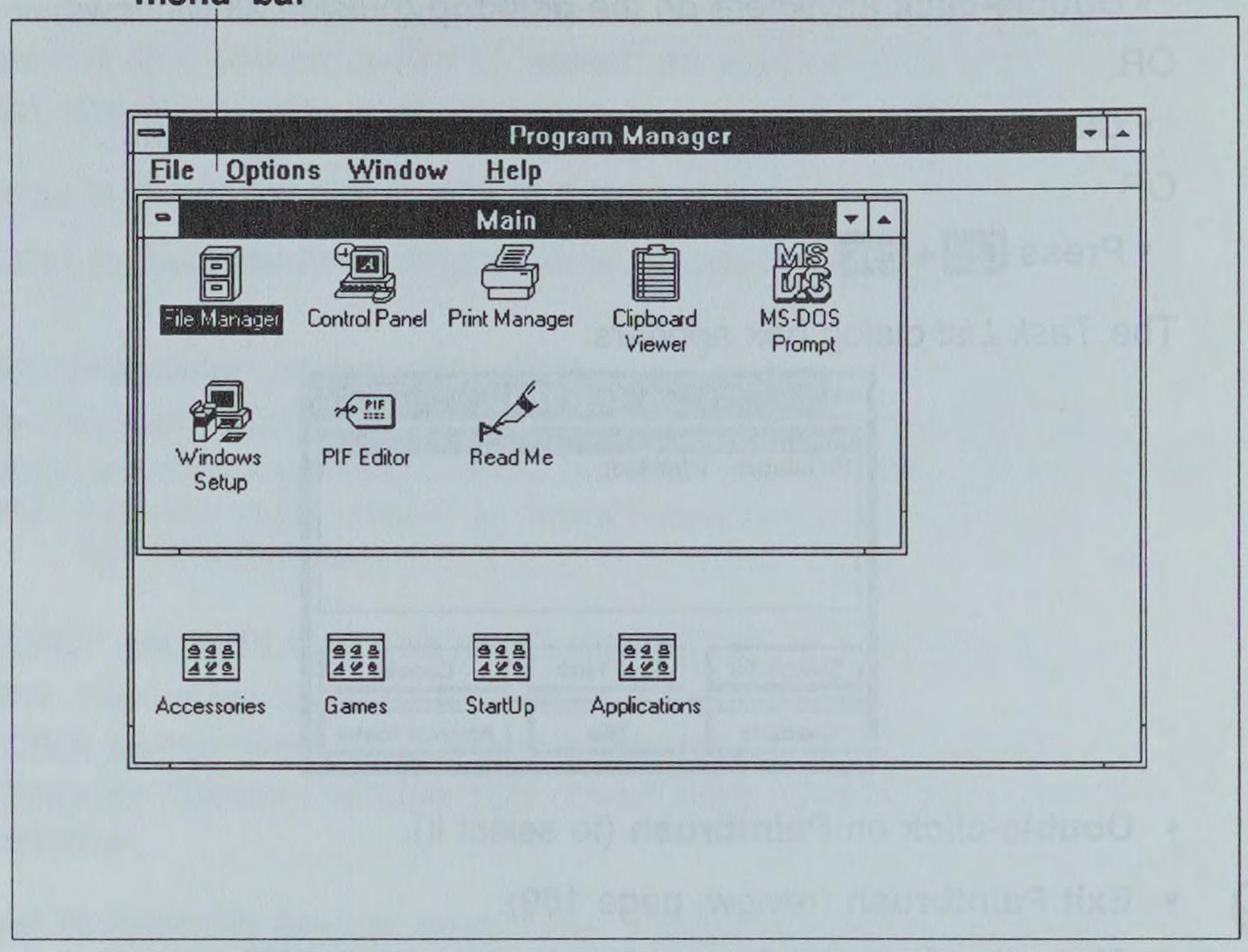
- **Press** Alt + F (File) (or some other underlined letter that represents a menu that you want to open).

CLOSE A MENU

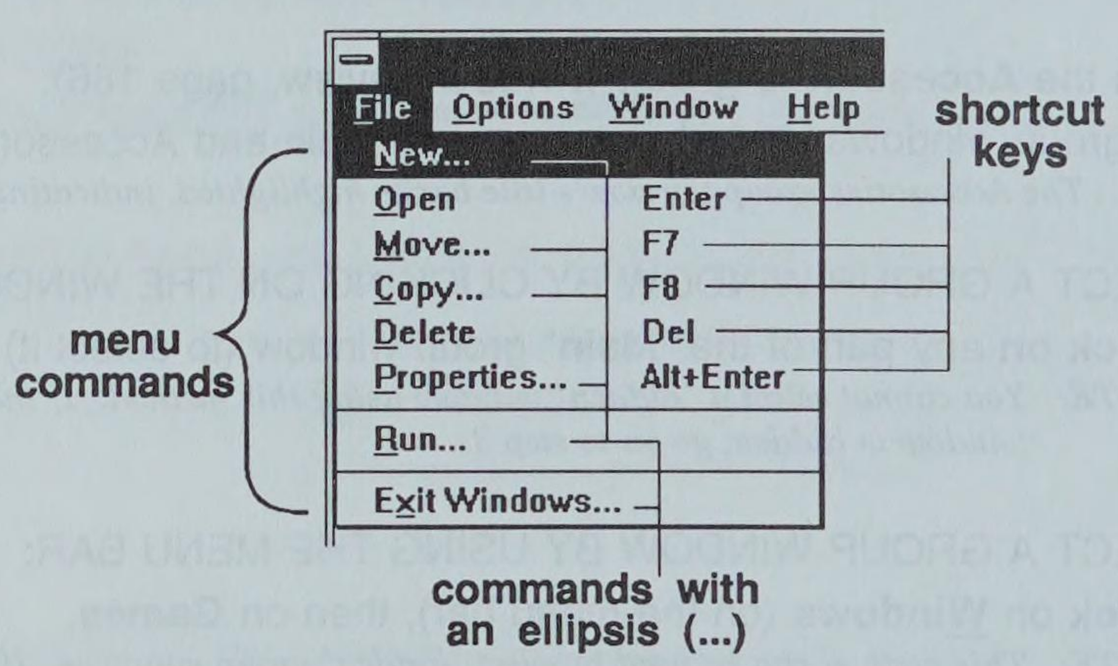
- **Press** Alt

1 **Start Windows** (review, page 184), if necessary.

Starting Windows Screen



2 **Click** on **File** (to *select* the File menu).
The *File* menu drops down:



3 CLOSE THE MENU:

- **Click** on **File**, again.

OR

- **Click** off (anywhere outside of) the **menu**.
  *NOTE: Be careful not to **click** on some item that you do not want to activate.*

OR

- **Press** Alt. (This takes you off the menu bar.)

OR

- **Press** Esc. (This leaves you on the menu bar.)

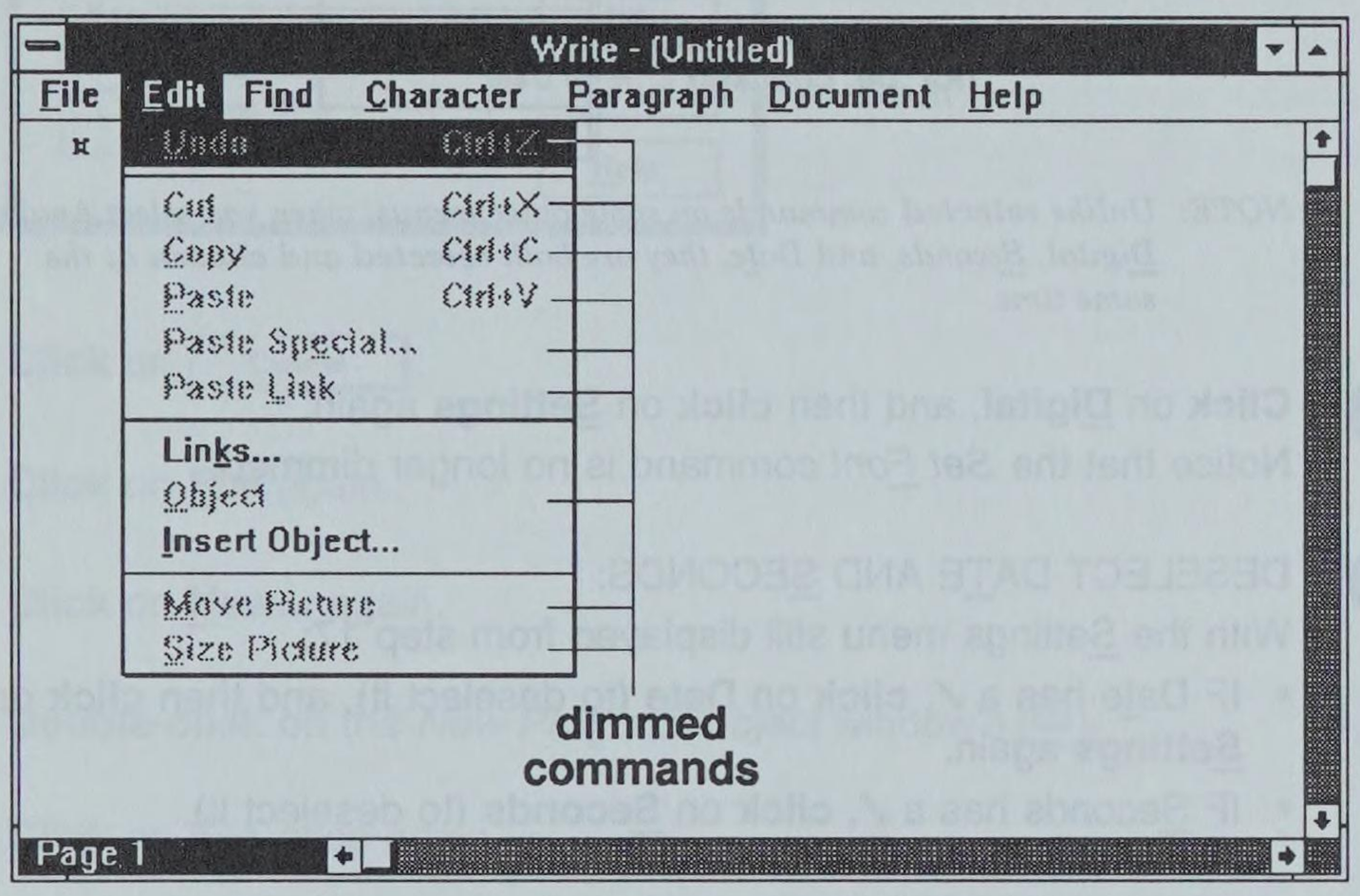
4 Repeat steps 2 and 3 several more times, using different ways to *cancel* the menu each time.

Continue Exercise 9 on the next page

5. **Open** the **Accessories** group window (review, page 186).

6. **Start Write** (review, page 188).

7. **Click** on **Edit** (to *select* the Edit menu).
   This Edit menu drops down. It has several *dimmed* commands.



8. **Click** off of the **Edit menu** (to *close* the Edit menu).

9. **Click** on **File** (to *select* the File menu).

10. **Click** on **Exit** (to *choose* the Exit command).
    You are returned to the Program Manager window.
    *NOTE: If a box appears asking if you want to "save current changes," **click** on* [No].

11. **Click** on **File** (to *select* the Program Manager's File menu).

12. **Click** on **Exit Windows** (to *choose* the Exit command).

13. **Press** Esc (to close the dialog box without exiting Windows).

14. **Start Clock** (review, page 188).
    NOTE: The clock has only one menu on the menu bar, Settings.

15. **Click** on **Settings** (to *select* the menu).

16. **Click** on **Analog** (to *select* the command), and then **click** on **Settings** again.

Continue Exercise 9 on the next page

dimmed command
A menu command that is shown in gray instead of black. A dimmed command cannot be used in the current situation.

Keyboard Users

CHOOSE A MENU COMMAND

1. To select the menu:
   - **Press** Alt + the letter that is underlined in the menu you want.

   OR
   - use → or ← to select the menu you want.
   - **Press** ↵
2. To choose the command:
   - **Press** the letter that is underlined in the command on the menu that you want.

   OR
   - use ↑ or ↓ to select the command you want.
   - **Press** ↵

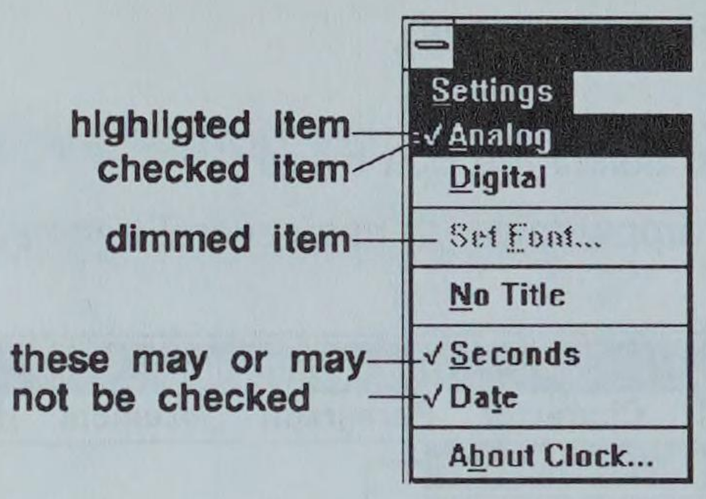
USE THE MENU BAR

select
To *mark* an item so that a subsequent action can activate it. For example, *highlighting* and *using a check mark* are two ways to mark a command. (Contrast with *choose*, page 192.)

analog clock
Displays a round clock with moving hour and minute hands (and, if you choose, a second hand).

digital clock
Displays a clock with a precise numeric readout, for example, 1:15:30 P.M.

The *Settings* menu appears—notice the dimmed *Set Font command*:



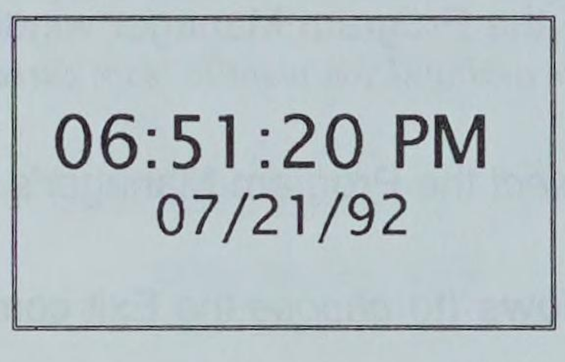
*NOTE: Unlike **selected** commands on some other menus, when you select Analog, Digital, Seconds, and Date, they are both **selected** and **chosen** at the same time.*

17 **Click** on **Digital**, and then **click** on **Settings** again.
Notice that the *Set Font* command is no longer dimmed.

18 DESELECT DATE AND SECONDS:
With the Settings menu still displayed from step 17:
- IF Date has a ✓, **click** on **Date** (to deselect it), and then **click** on **Settings** again.
- IF Seconds has a ✓, **click** on **Seconds** (to deselect it).

19 SELECT DATE AND SECONDS:
Use the Settings menu to **select Date** and then **Seconds**.
Are both the date and seconds showing on the clock?

20 **Click** on **Settings**, and then **click** on **No Title**.
A clock similar to this one appears:



21 **Double-click** anywhere in the **Clock** window (to make the title bar and menu reappear).

22 **Click** on **Settings**, and then **click** on **Analog**.

23 **Exit** the **Clock** by **double-clicking** on ▭ (Control box).

24 **Close** the **Accessories** window.

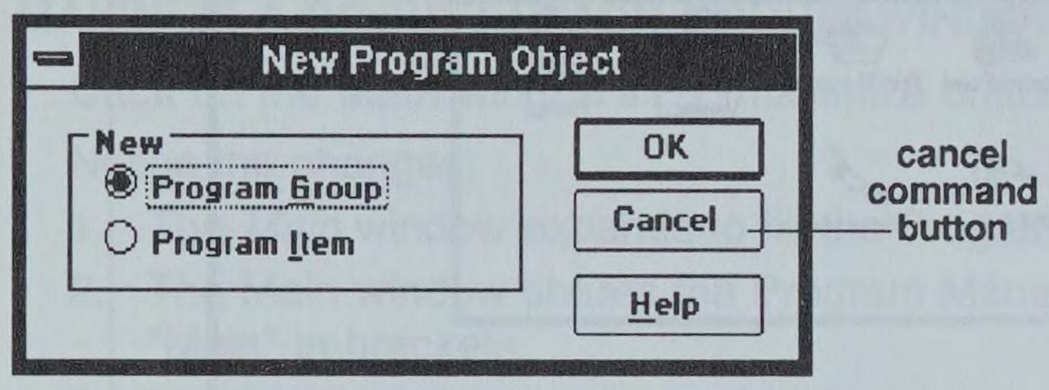
25 **Go** on to Exercise 10.
OR
Exit Windows (review, page 185).

1. **Start Windows** (review, page 184), if necessary.

2. **Click** on **File**.

3. **Click** on **New...** .

   The *New Program Object* dialog box appears:



4. **Click** on Cancel.

5. **Click** on **File** again.

6. **Click** on **New...** again.

7. **Double-click** on the *New Program Object* window's control box.

8. **Click** on **File** once again.

9. **Click** on **New...** once again.

10. **Press** Esc.

11. **Open** the **Accessories** window (review, page 186).

12. **Start Calendar** (review, page 188).

13. **Click** on **File**.

14. **Click** on **Page Setup...** .

15. **Click** on Cancel.

16. **Exit Calendar** (review, page 189).

17. **Close** the **Accessories** window (review, page 187).

18. **Go** on to Exercise 11.

    OR

    Exit Windows (review, page 185).

EXERCISE 10
Cancel

cancel
To escape (or back out of) a menu or dialog box without completing a command.

ways to cancel (close) a menu
- **Click** off of the menu.
- **Press** Alt
- **Click** on the original menu item again.
- **Press** Esc

(The last method leaves the menu bar selected.)

ways to cancel (close) a dialog box:
- **Double-click** on the control box
- **Click** on Cancel
- **Press** Esc
- **Press** Alt + F4
- **Press** Alt + Space, C

ways to cancel (exit or close) an application window:
- **Double-click** on the control box
- **Click** on the control box, **click** on C
- **Press** Alt + F4
- **Press** Alt + F, X
- **Press** Alt + Space, C

ways to cancel (close) a document window:
- **Double-click** on the control box
- **Click** on the control box, **click** on C
- **Press** Ctrl + F4
- **Press** Alt + –, C

Keyboard Users

CANCEL
See "ways to cancel" above.

EXERCISE 11
Maximize a Window

Exercises 11 and 12 should be done during the same session.

maximize a window
To enlarge a window to its maximum size.

maximize button ▲
Located at the right end of the title bar, it is used to enlarge a window to its maximum size.

Keyboard Users

MAXIMIZE APPLICATION WINDOW

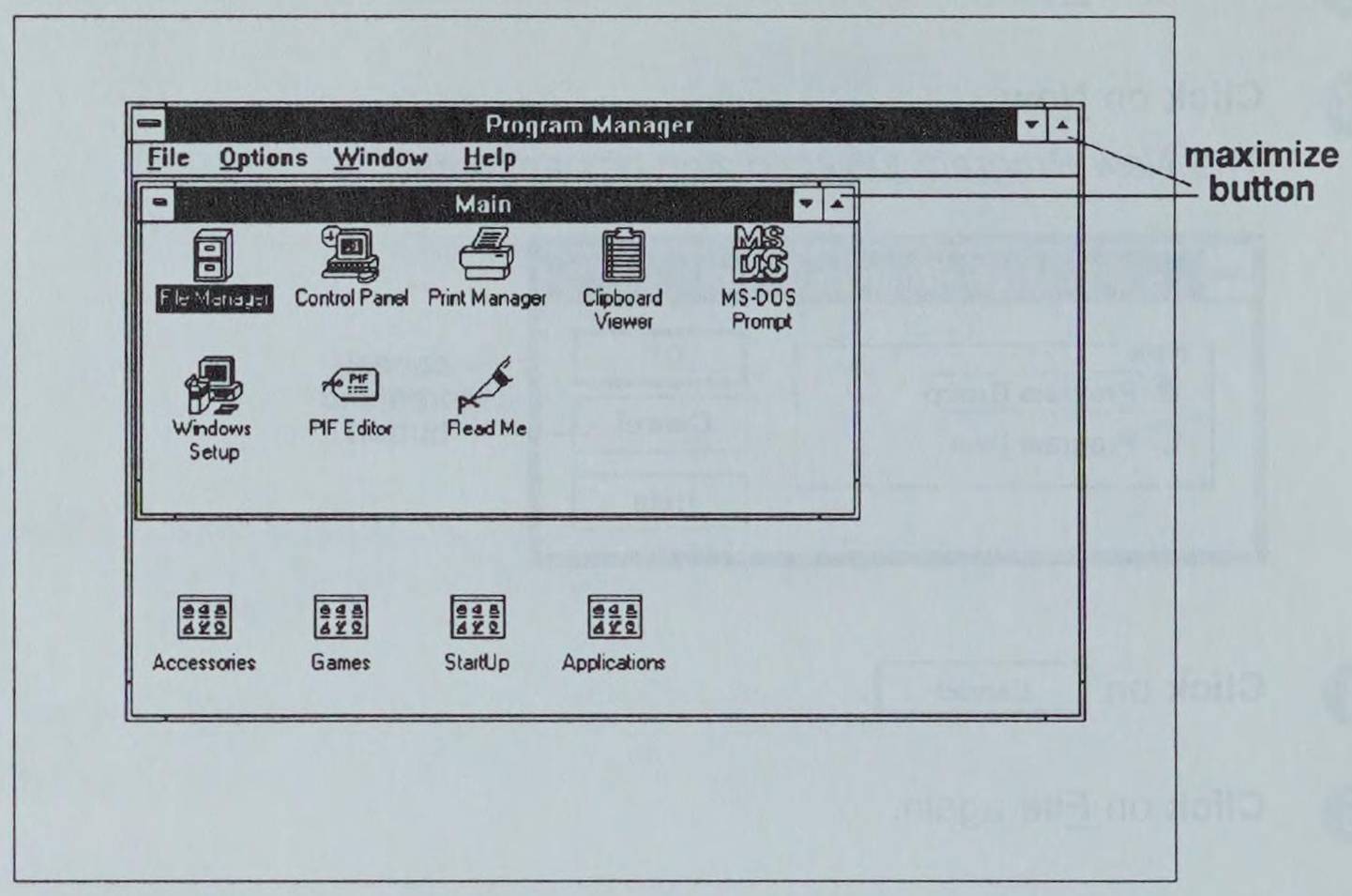
1. **Select** window to maximize (review, page 190).
2. **Press** Alt + Space (opens Control box)
3. **Press** X (Maximize)

MAXIMIZE DOCUMENT (OR GROUP) WINDOW

1. **Select** window to maximize (review, page 191).
2. **Press** Alt + − (opens Control box)
3. **Press** X (Maximize)

❶ **Start Windows** (review, page 184), if necessary.

Starting Windows Screen



❷ MAXIMIZE AN APPLICATION WINDOW:

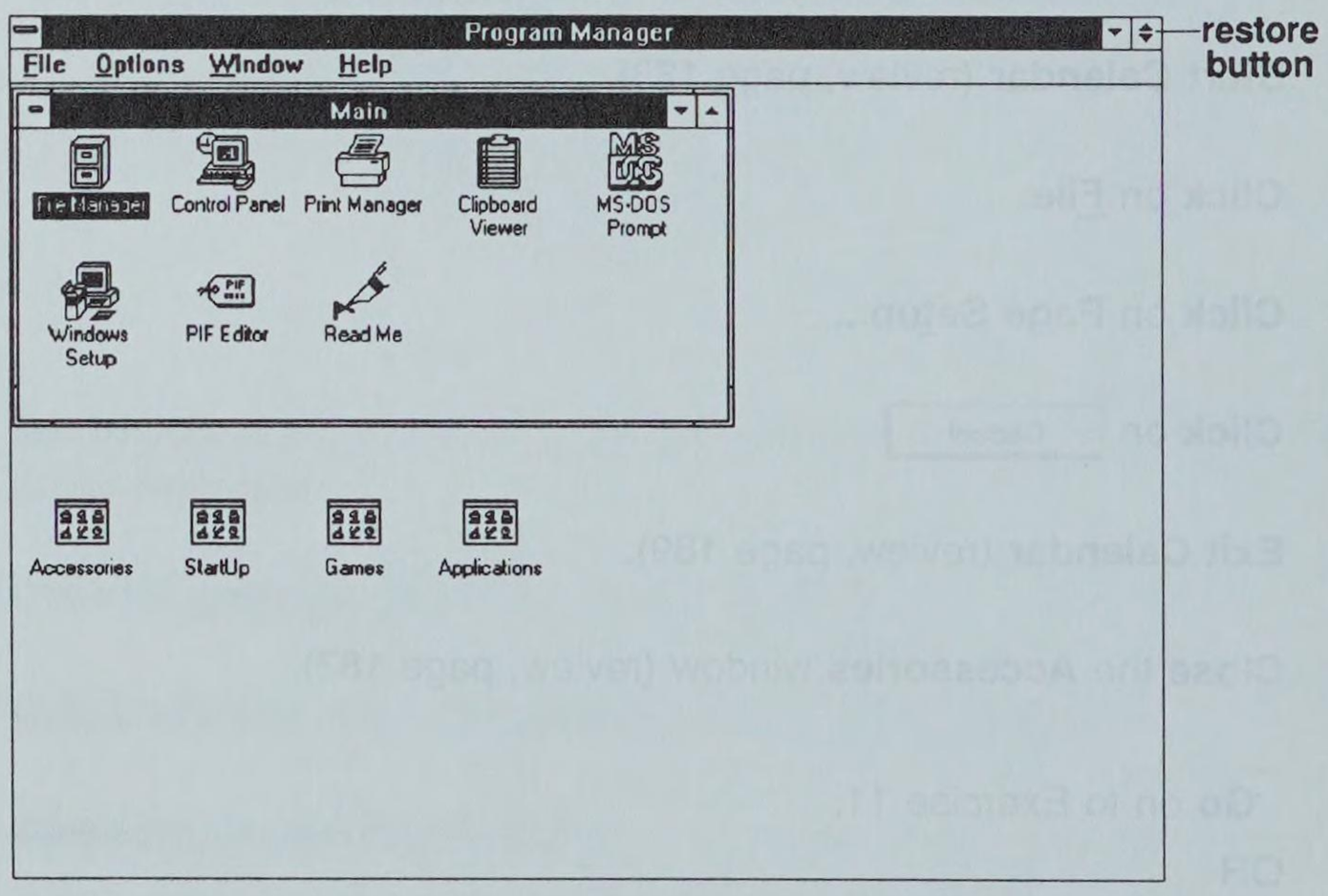
- **Click** on the **Program Manager's** ▲ (maximize button).

OR

- **Double-click** on the **Program Manager's** title bar.

NOTE: When a window is maximized, ▲ *(maximize button) is replaced with* ▲▼ *(restore button).*

Maximized Program Manager Window



Go on to Exercise 12

EXERCISE 12
Restore a Window

Continue from Exercise 11, doing both during the same session.

restore a window
To return a maximized window to its previous size.

restore button ⧉
Located at the right end of the title bar of a maximized window, it replaces the maximize button when a window is maximized. The restore button is used to return a maximized window to its previous size.

*NOTE: While **double-clicking** on a maximized application window's title bar will **restore** it, this procedure does not work for a maximized document window.*

1 • **Click** on the **Program Manager's** ⧉ (Restore Button).

OR

• **Double-click** on the **Program Manager's** title bar.

*NOTE: When a window is **restored**, the **restore button** is replaced with a **maximize button**.*

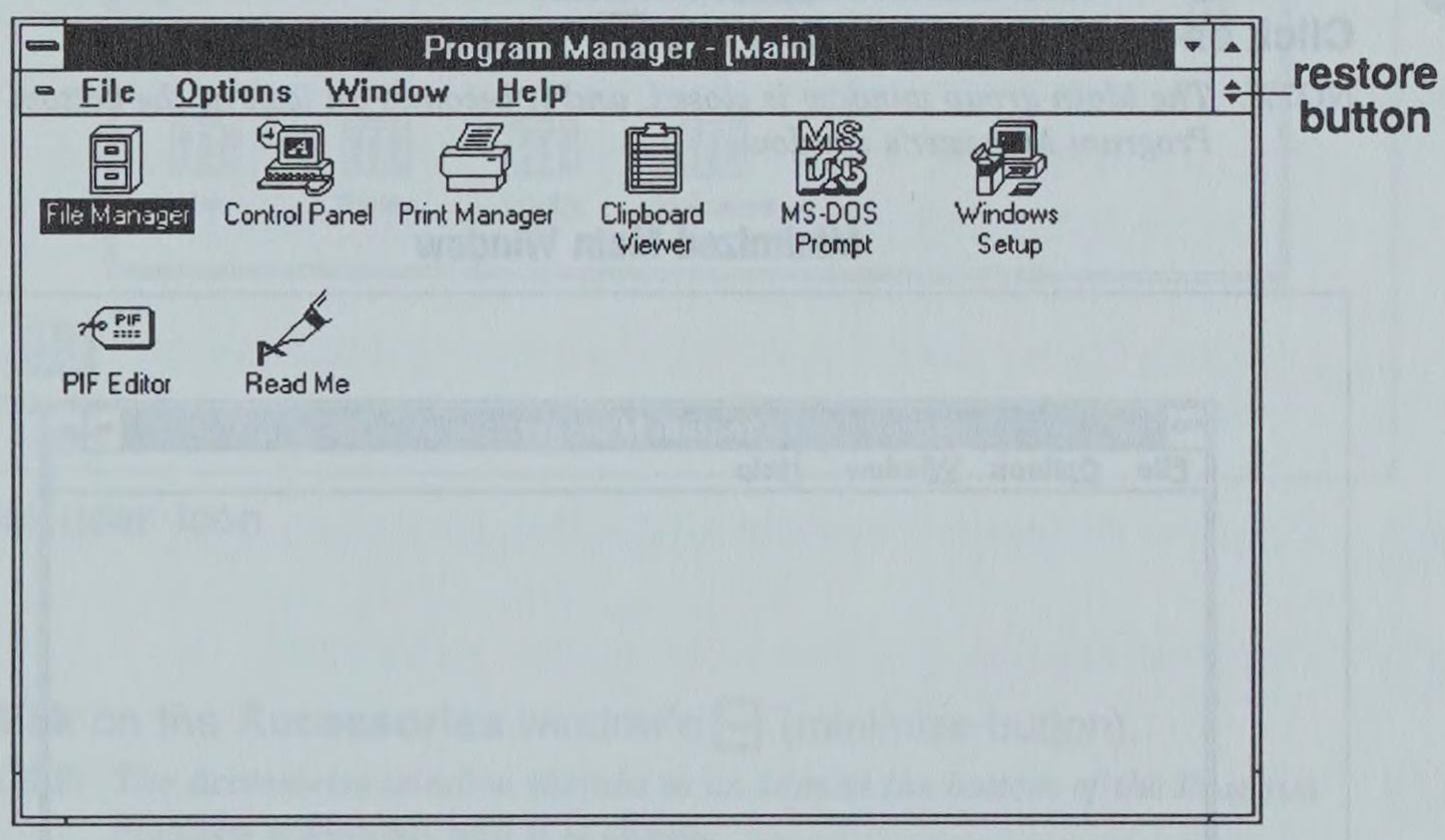
2 **MAXIMIZE A DOCUMENT (OR GROUP) WINDOW:**

• **Click** on the **Main** window's ⧉ (maximize button).

Notice the changes:

1. The *Main* window expands to fill the Program Manager's window.
2. The Main window shares the Program Manager's *title bar*, showing "Main" in brackets.
3. The Main window's maximize button is replaced with a restore button (appearing at the right end of the Program Manager's *menu bar*).
4. The Main window's minimize button disappears.
5. The Main window's Control box appears at the left edge of the Program Manager's *menu bar*.

Maximized Main Group Window



3 **Click** on the **Main** window's ⧉ (restore button), and watch it return to its original state.

4 **Maximize** the **Main** window again.

5 **Maximize** the **Program Manager** window (review, page 196).

*NOTE: Two **restore buttons** now appear in the upper right corner of the screen, one for each of the maximized windows.*

6 **Restore** the **Program Manager** window (top ⧉ button).

7 **Restore** the **Main** window.

8 **Go** on to Exercise 13.

OR

Exit Windows (review, page 185).

Keyboard Users

RESTORE APPLICATION WINDOW

1. **Press** Alt + Space (opens Control box)
2. **Press** R (Restore)

RESTORE DOCUMENT WINDOW

1. **Press** Alt + − (hyphen) (opens Control box)
2. **Press** R (Restore)

EXERCISE 13
Minimize a Window

– Terms and Notes –

minimize a window
To shrink a window to an icon.

minimize button
Located at the right of the title bar (just to the left of the maximize button) and used to shrink a window to an icon.

Keyboard Users

MINIMIZE APPLICATION WINDOW

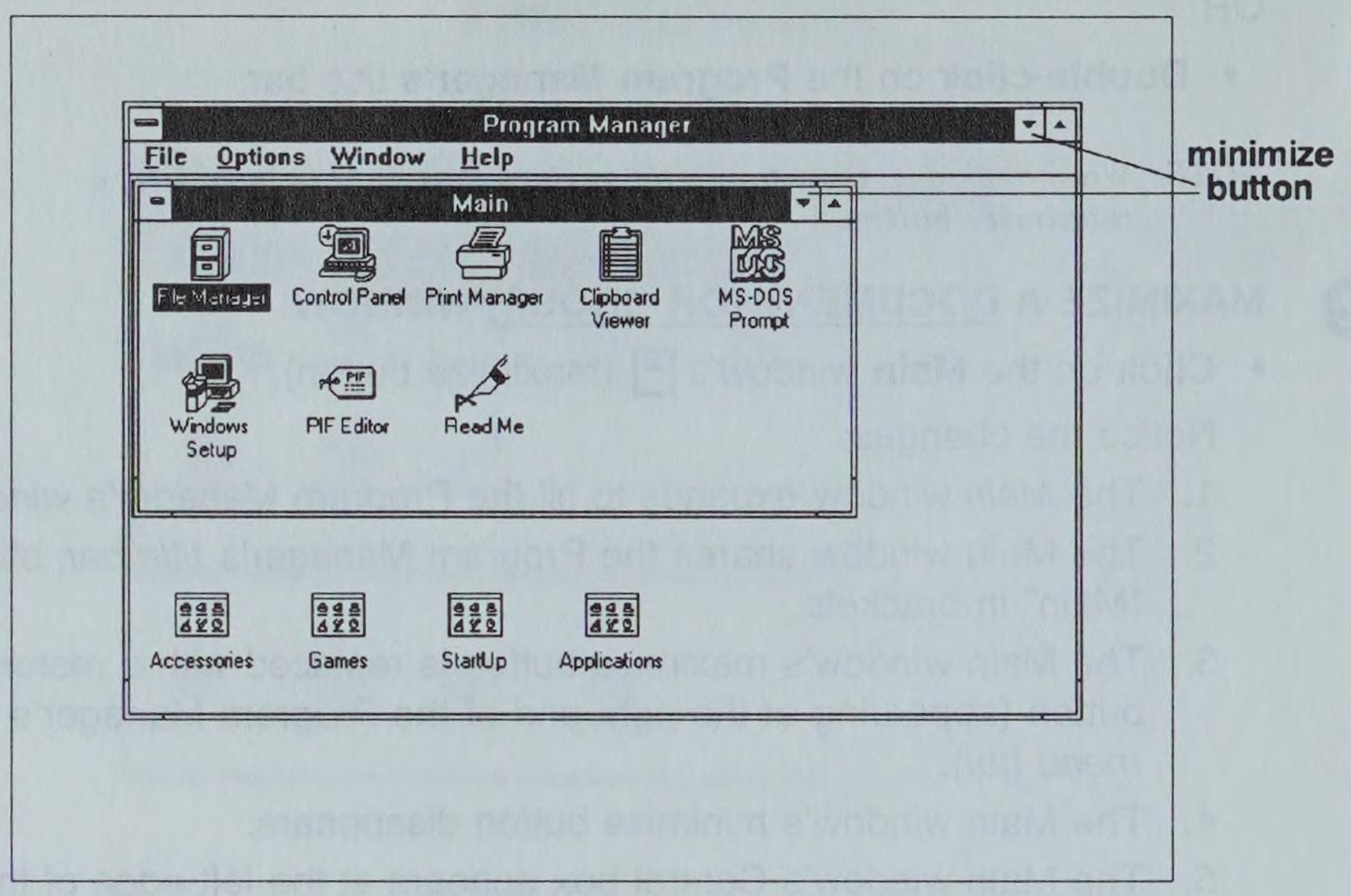
1. **Select** desired window.
2. **Press** Alt + Space (opens Control box)
3. **Press** N (Minimize)

MINIMIZE DOCUMENT WINDOW

1. **Select** desired window.
2. **Press** Alt + – (hyphen) (opens Control box)
3. **Press** N (Minimize)

❶ **Start Windows** (review, page 184), if necessary.

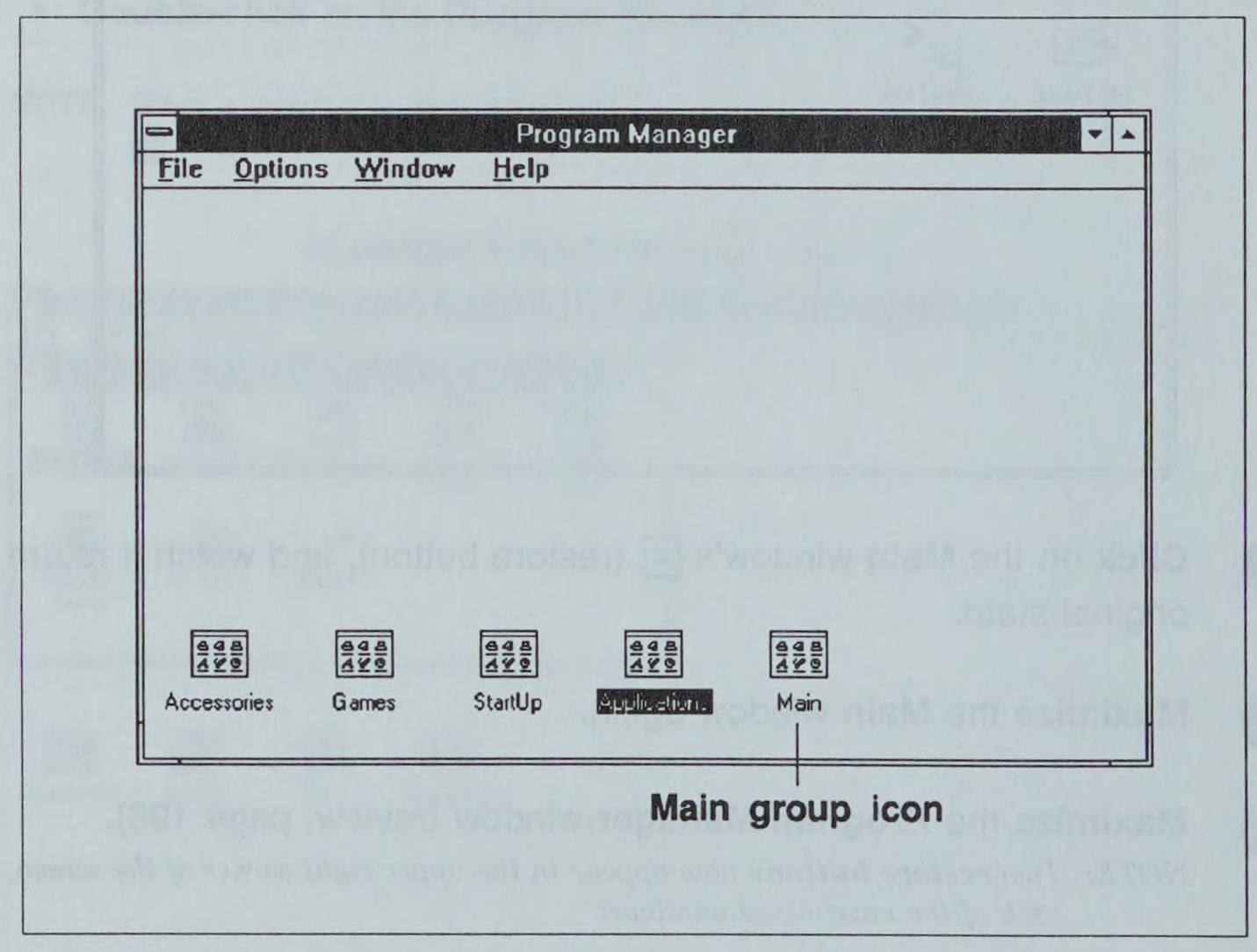
Starting Windows Screen



❷ **MINIMIZE A DOCUMENT (OR GROUP) WINDOW:**
Click on the **Main** group window's ▼ (minimize button).

NOTE: The Main group window is closed, and it becomes an icon at the bottom of the Program Manager's window.

Minimized Main Window



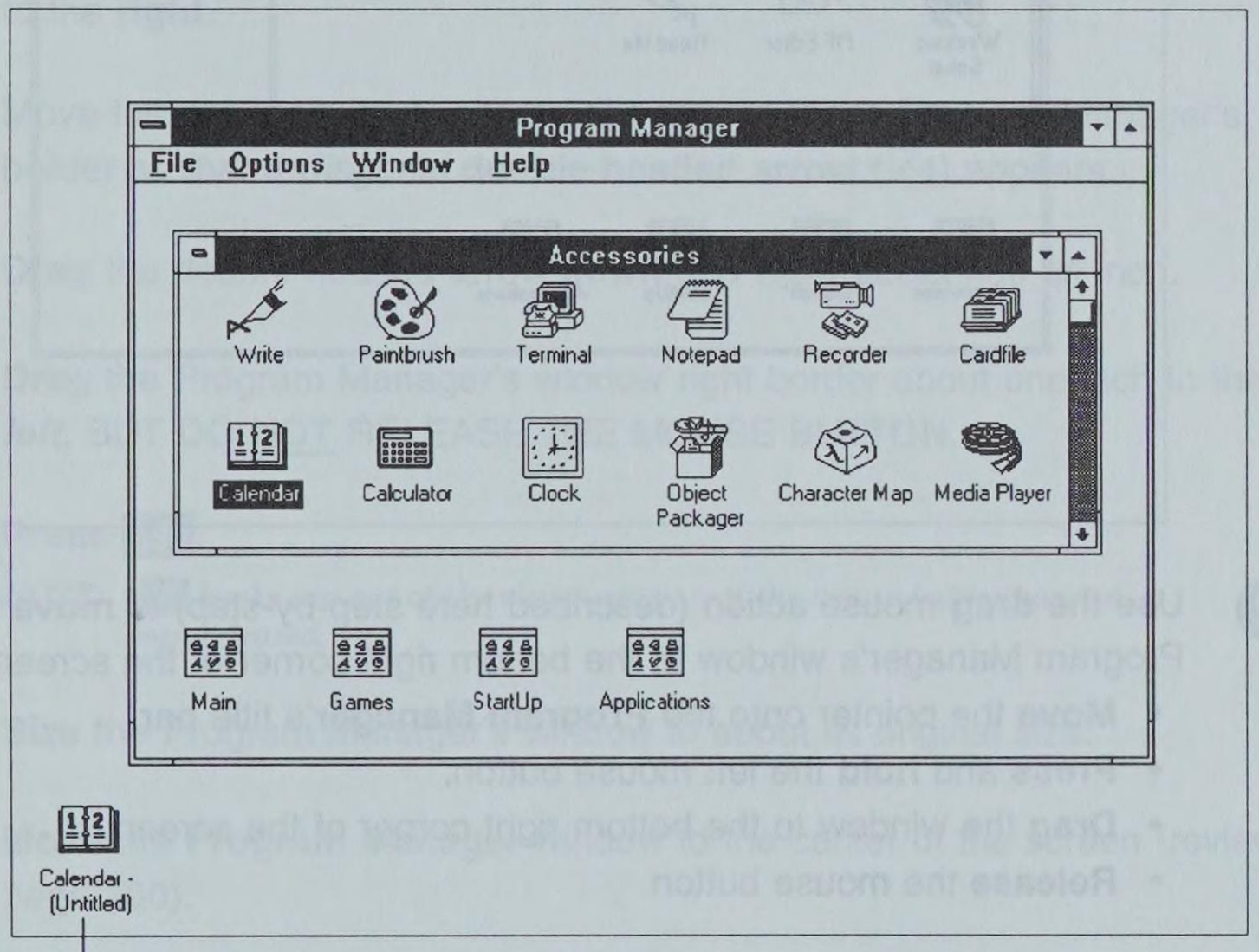
Continue Exercise 13 on the next page

3. **Open** the **Accessories** window (review, page 186).

4. **Start** the **Calendar** program (review, page 188).

5. **MINIMIZE AN APPLICATION WINDOW:**
   Click on the **Calendar's** minimize button.
   NOTE: The Calendar becomes an application icon at the bottom of the desktop...but it is not closed. It is a "running" application icon.

Minimized Calendar Window Becomes an Icon



Calendar icon

6. **Click** on the **Accessories** window's (minimize button).
   NOTE: The Accessories window shrinks to an icon at the bottom of the Program Manager's window, and it is closed.

7. **Open** the **Main** icon to a window (review, page 186).
   NOTE: The screen should look like the "starting Windows screen" with the addition of the calendar icon at the bottom of the desktop.

8. **Double-click** on the **Calendar** icon (to restore it).

9. **Exit** the **Calendar** window (review, page 189).

10. **Exit Windows** (review, page 185).

EXERCISE 13 (continued)
MINIMIZE A WINDOW

*NOTE: When a **group** window is minimized, it becomes an icon and is closed. However, when a **program** window is minimized, it becomes an icon, but it is not closed.*

EXERCISE 14

Move a Window

move a window
To change the location of a window.

title bar
The bar at the top of a window that holds the window's **title**.

drag (mouse action)
- Move the pointer onto an item,
- Press and hold the left button,
- Slide the mouse to a new location, and
- Release the mouse button.

Keyboard Users

MOVE A WINDOW

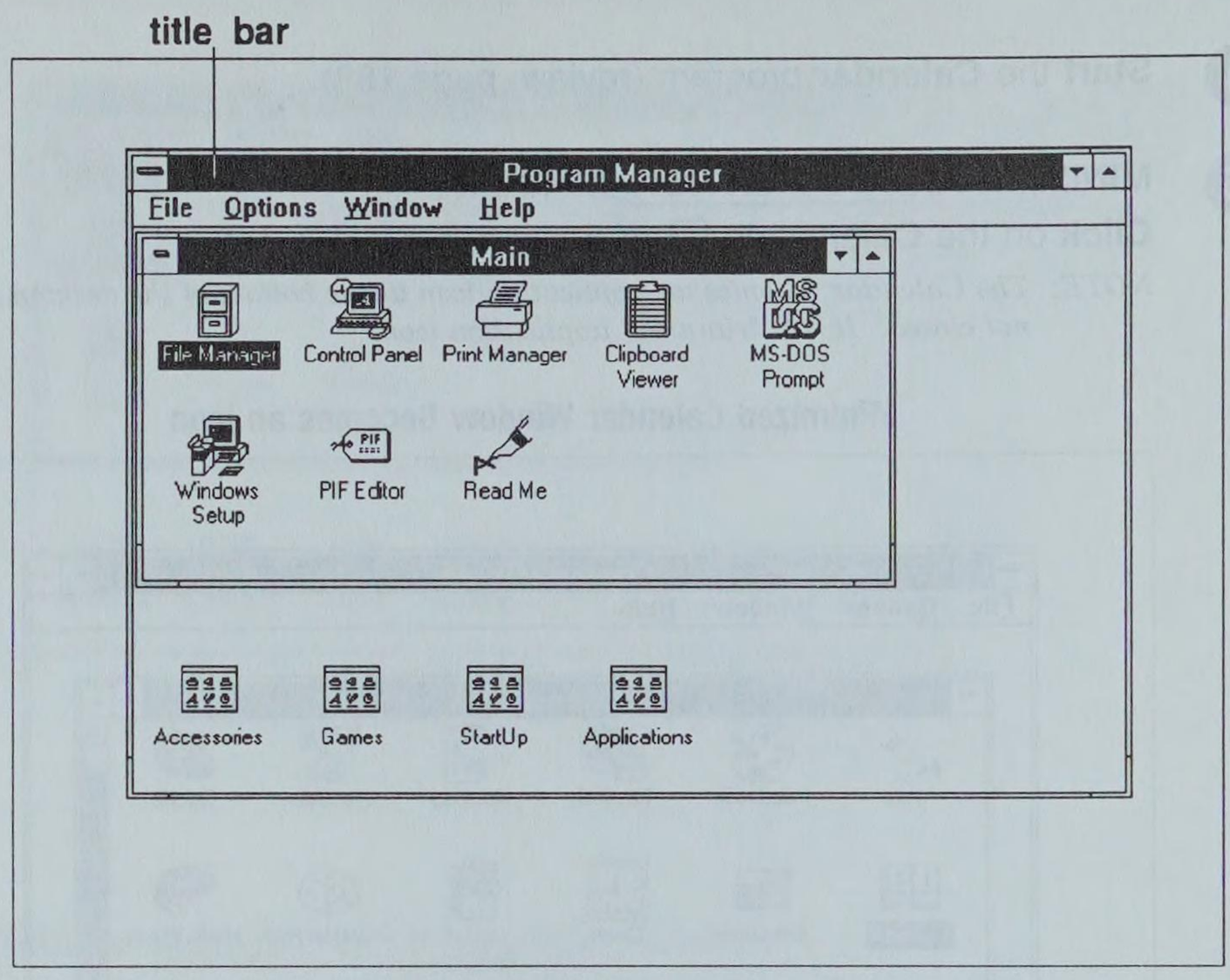
1. **Select** desired window.
2. Application Window:
   Press Alt + Space
   (opens Control box)

   OR

   Document Window:
   Press Alt + - (hyphen)
   (opens Control box)
3. **Press** M (Move)
4. **Press** →, ←, ↑, or ↓
   (to move window as desired)
5. **Press** ↵

1. **Start Windows** (review, page 184).

Starting Windows Screen



2. Use the **drag** mouse action (described here step-by-step) to **move** the Program Manager's window to the bottom right corner of the screen:
   - **Move** the pointer onto the **Program Manager**'s title bar.
   - **Press** and **hold** the left mouse button.
   - **Drag** the window to the bottom right corner of the screen.
   - **Release** the mouse button.
3. **Drag** the **Program Manager's Title Bar** back to its original location.
4. **Open** the **Games** group window (review, page 186).
5. **Move** the **Game** group window to a new location, but do not leave its *control box* hidden.
6. **Close** the **Games** group window (review, page 187).
7. **Open** the **Games** group window again (review, page 186).
   NOTE: The Games window opens to its previous size and location.
8. **Close** the **Games** group window (review, page 187).
   NOTE: The screen should look like the "starting Windows screen."
9. **Go** on to Exercise 15.

   OR

   Exit Windows (review, page 185).

1. **Start Windows** (review, page 184), if necessary.

FROM THE *STARTING WINDOWS* SCREEN:

2. Move the **Program Manager** window to the top left corner of the screen (review, page 200).

3. Move the pointer to the right border of the Program Manager's window so that a *horizontal* **double-headed arrow** (⇔) appears.

4. Use the **drag** mouse action (shown on the previous page) to **drag** the double-headed arrow (and the window's right border) about half an inch to the **right**.

5. Move the pointer to the bottom right **corner** of the Program Manager's border so that a *diagonal* **double-headed arrow** (⇘) appears.

6. **Drag** the double-headed arrow **down** and **right** about half an inch.

7. **Drag** the Program Manager's window right border about one inch to the ***left***, BUT DO NOT RELEASE THE MOUSE BUTTON.

8. **Press** Esc.

   NOTE: Esc backs you out of the sizing action – if the mouse button has not been released.

9. **Size** the Program Manager's window to about its original size.

10. **Move** the **Program Manager** window to the center of the screen (review, page 200).

11. Change the **size** of the Main window.

    NOTE: If you make it smaller, scroll bars appear.

12. **Close** the Main group window (review, page 187).

13. **Open** the Main group window (review, page 186).

    NOTE: The Main window opens to its last size and location.

14. **Size** the Main group window to about its original size, with no scroll bars showing.

15. **Go** on to Exercise 16.

    OR

    Exit Windows (review, page 185).

EXERCISE 15
Size a Window

size a window
To change the size of a window.

NOTE: When you change the size of a window, Windows will remember the new size when you close and then re-open the window (as long as you remain in Windows).

double-headed arrow
The shape the pointer takes when it is used to size a window.

double-headed arrows appear as:

⇔ on right or left edge of window

⇕ on top or bottom edge of window

⇘ on corner of window

Keyboard Users

SIZE A WINDOW

1. **Select** desired window.
2. Application Window:
   Press Alt + Space
   (opens Control box)

   OR

   Document Window:
   Press Alt + – (hyphen)
   (opens Control box)
3. **Press** S (Size)
4. **Press** →, ←, ↑, or ↓ once in the direction of border to be sized.
4. **Press** →, ←, ↑, or ↓ until desired size is obtained.
5. **Press** ↵

EXERCISE 16
Scroll through a Window

scroll through a window
To move through information in a window in order to view parts that are beyond the window's borders.

IMPORTANT: If you cannot find what you want in a window, remember to scroll through the window, if there are scroll bars.

scroll bar
A bar that appears at the right and/or bottom of a window whose contents are not completely visible. Each scroll bar contains two scroll arrows and a scroll box.

scroll arrow
The arrow at each end of a scroll bar, used to *scroll* through the contents of the window.

scroll box
The small box in a scroll bar that shows the position of the information *displayed* in relation to the *entire contents* of the window.

*NOTE: This exercise has you scroll through group windows. **Scroll bars** are also used in document windows and dialog boxes.*

Keyboard Users

SCROLL THROUGH A WINDOW

1. **Select** the desired window (one that has a scroll bar).
2. Use ↑ ↓ to scroll through the window.

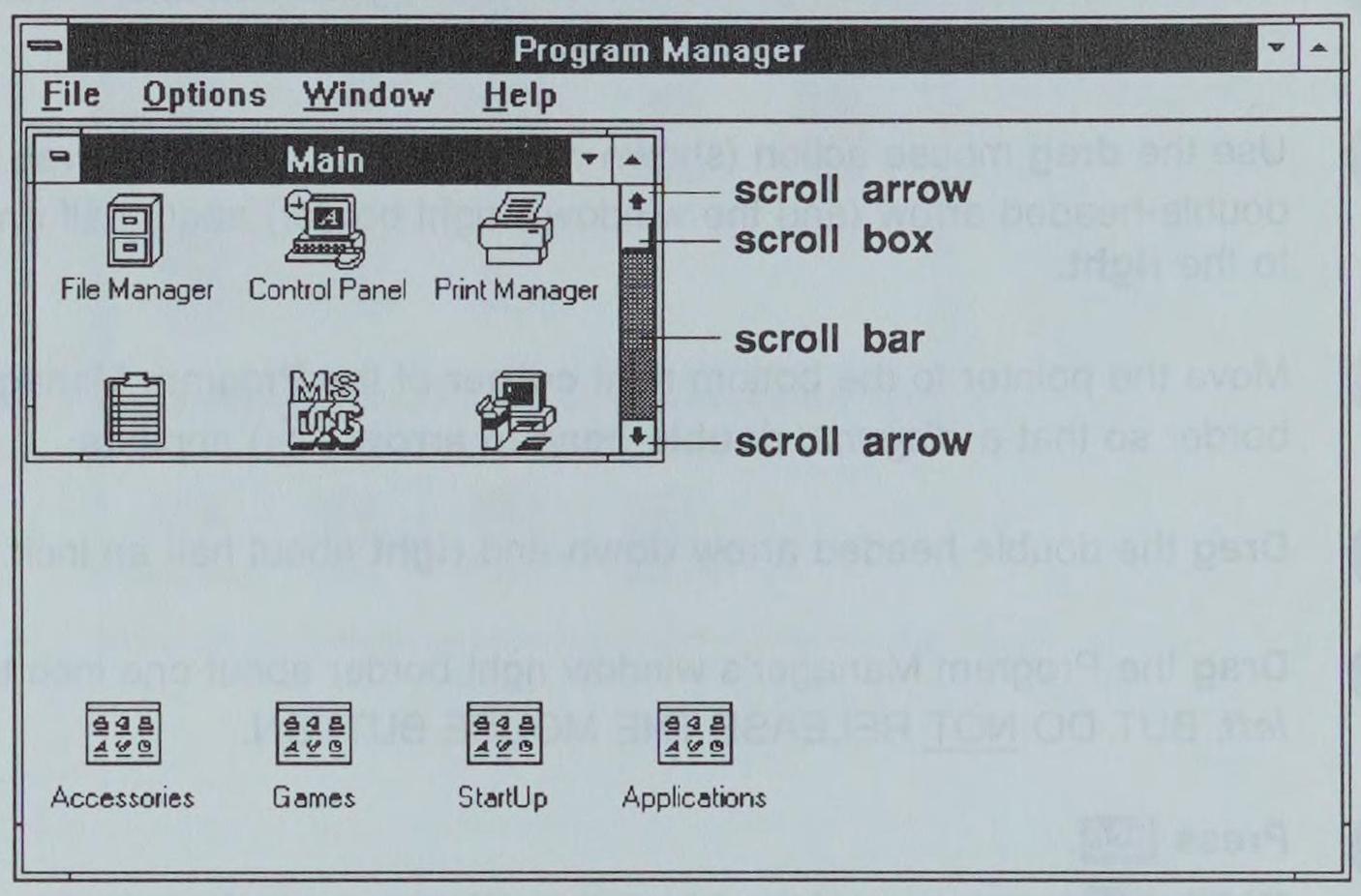
NOTE: You cannot use ↓ if there is no icon below the highlighted icon.

1. **Start Windows** (review, page 184), if necessary.

FROM THE *STARTING WINDOWS* SCREEN:

2. Starting at the right edge, **size** the Main window to about 3 inches wide by 2 inches high (review, page 201).

Main Window Sized to about 3" Wide by 2" High



3. **Click** on the *right (or bottom)* **scroll arrow**, repeatedly, until the **scroll box** moves to the *right edge (or bottom)* of the **scroll bar.**
NOTE: Now you can see the right side (or bottom) of the contents in the window.

4. **Drag** the **scroll box** to the left edge (or top) of the **scroll bar.**
NOTE: It may take some practice to keep the pointer within the scroll bar.

5. Practice **dragging** the **scroll box** back and forth (or up and down) in the **scroll bar**. Notice the contents of the window flow back and forth (or up and down) as you drag the scroll box in the scroll bar.

6. **Click** on the *right (or bottom)* **scroll arrow** several times.

7. **Click** just before the *left (or top)* **scroll arrow** a few times.
NOTE: It moves in larger jumps than when clicking on the scroll arrow.

8. **Size** the Main window to about its original size (review, page 201).
NOTE: There is no command to return a newly sized window back to its original size (to do so, you must either size the window again—or, possibly, exit and start Windows).

9. Scroll the Main window so that all the icons show and, if the window is large enough, the scroll bars will disappear.

10. **Go** on to Exercise 17.

OR

Exit Windows (review, page 185).

1. **Start Windows** (review, page 184), if necessary.

FROM THE *STARTING WINDOWS* SCREEN:

2. **Close** the **Main** window (review, page 187).

3. **Drag** the **Main** window **icon** to the top right corner of the Program Manager's window.

4. **Drag** the **Accessories** window **icon** to the top left corner of the Program Manager's window.

5. ARRANGE ICONS:
   - **Click** on **Window** (on the menu bar).
   - **Click** on **Arrange Icons**.

   NOTE: The group window icons are arranged in a row at the bottom of the Program Manager window.

6. **Open** the **Accessories** window (review, page 186).

7. **Move** the program icons around just a little (about ¼").

   *NOTE: If you move the icons too far, the **arrange icons** command may change the locations of the icons.*

   NOTE: The Auto Arrange command (found in the Options menu) must be deselected (no check mark by it) or the program icons will jump back when you try to move them.

8. **Arrange** the **icons** using the command (step 5).

   NOTE: The program-item icons are arranged within the accessories group window.

9. **Start Calendar** (review, page 188).

10. **Minimize Calendar** (review, page 198).

    *NOTE: Calendar becomes a running **application icon** at the bottom of the desktop.*

11. **Drag** the **Calendar icon** to the bottom right corner of the desktop.

12. **Drag** the **Calendar icon** back to the bottom left corner of the desktop.

13. **Click** on the **Calendar icon** (the Control menu pops up).

14. **Click** on **Close**.

15. **Close** the **Accessories** group window (review, page 187).

16. **Move** the **icons** around a little.

17. **Arrange** the **icons** using the command.

18. **Open** the **Main** group window (review, page 186).

19. **Go** on to Exercise 18.

    OR

    Exit Windows (review, page 185).

EXERCISE 17
Move and Arrange Icons

move icons

To change the location of:

1) **group window icons** in the Program Manager's workspace, and
2) **application icons** on the desktop.

*NOTE: Moving **program icons** "within a group window" and "from one group to another group" is covered in Ex. 31.*

IMPORTANT: The **arrange icons** command arranges one of two different sets of icons. IF a group window icon is highlighted, the **arrange icons** command will arrange the group window icons in a row at the bottom of the Program Manager window. Or, if a program icon is highlighted, the **arrange icons** command will arrange the program icons within its group window.

Keyboard Users

MOVE APPLICATION ICONS

1. Press Alt + Esc until the desired *application icon name* is highlighted.
2. Press Alt + Space
3. Press M (Move)
   (a four-headed arrow appears on the icon)
4. Use ↕ to move the icon as desired.
5. Press ↵

MOVE GROUP WINDOW ICONS

1. Press Ctrl + Tab until the desired *group window icon* is highlighted.
2. Press Alt + - (hyphen)
3. Press M (Move)
   (a four-headed arrow appears on the icon)
4. Use ↕ to move the icon as desired.
5. Press ↵

ARRANGE GROUP WINDOW ICONS

With Program Manager selected and a group icon highlighted:

1. Press Alt + F (File)
2. Press A (Arrange Icons)

EXERCISE 18
Arrange Group Windows

arrange group windows
Use one of Windows' two methods (cascade or tile) to position the open group windows on the screen so that they can all be seen.

cascade
To resize and layer the open group windows, within the Program Manager workspace, so that the title bar of each group window is visible.

Keyboard Users

ARRANGE GROUP WINDOW
WITH THE PROGRAM MANAGER WINDOW HIGHLIGHTED:

- **Press** Shift + F5 (shortcut keys to cascade)

OR

- **Press** Shift + F4 (shortcut keys to tile)

OR

- **Press** Alt + W (to open Window menu)
- **Press** C (Cascade)

  OR

  Press T (Tile)

1. **Start Windows** (review, page 184), if necessary.

FROM THE *STARTING WINDOWS* SCREEN:

2. **Open** the **Accessories** window (review, page 186).

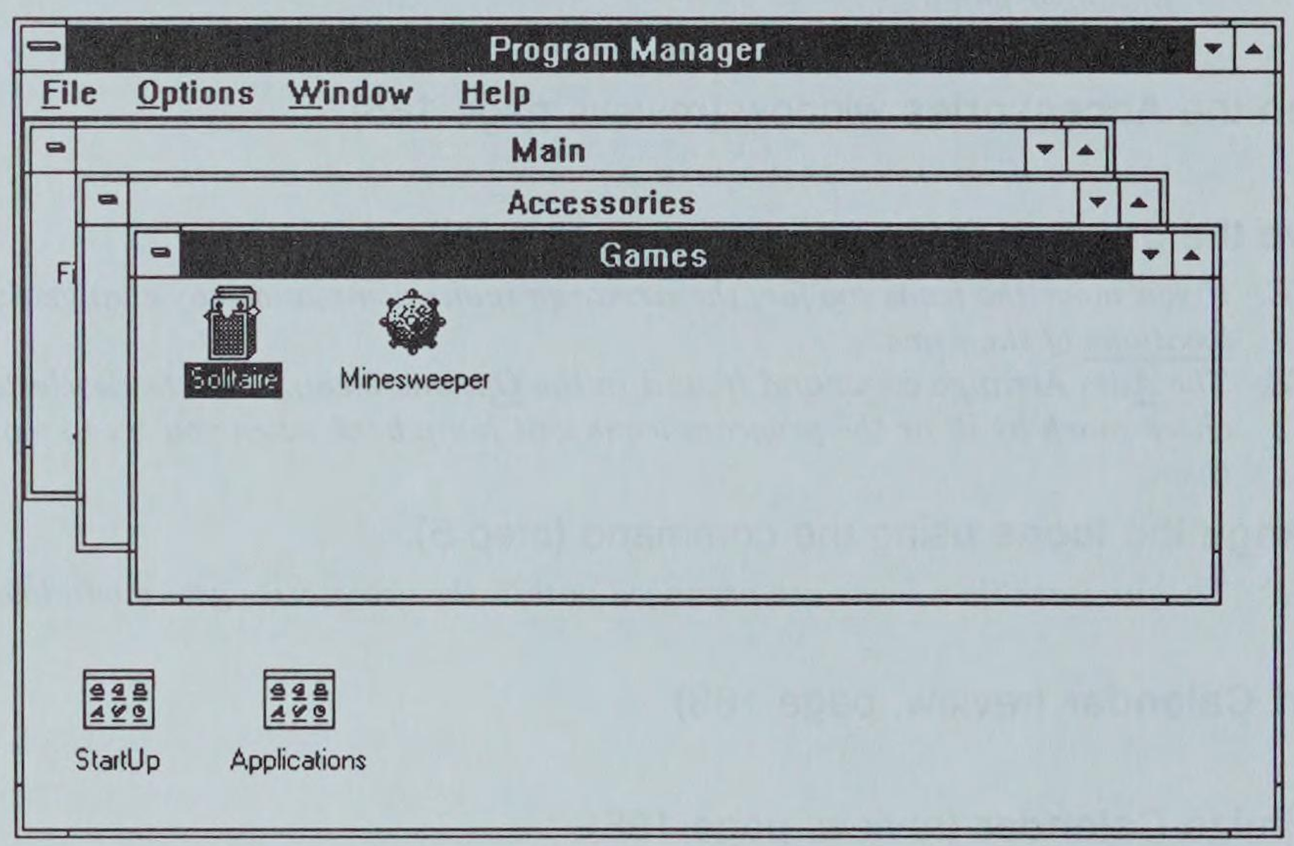
3. **Open** the **Games** window (review, page 186).

4.
- **Click** on Windows.
- **Click** on Cascade.

OR

- **Press** Shift + F5. (shortcut keys to cascade windows)

Cascaded Group Windows



NOTE: If the Program Manager's window is not large enough to show all the title bars, the group windows may not cascade correctly. In this case, ***size*** *the Program Manager window larger and then give the command to* ***cascade*** *again.*

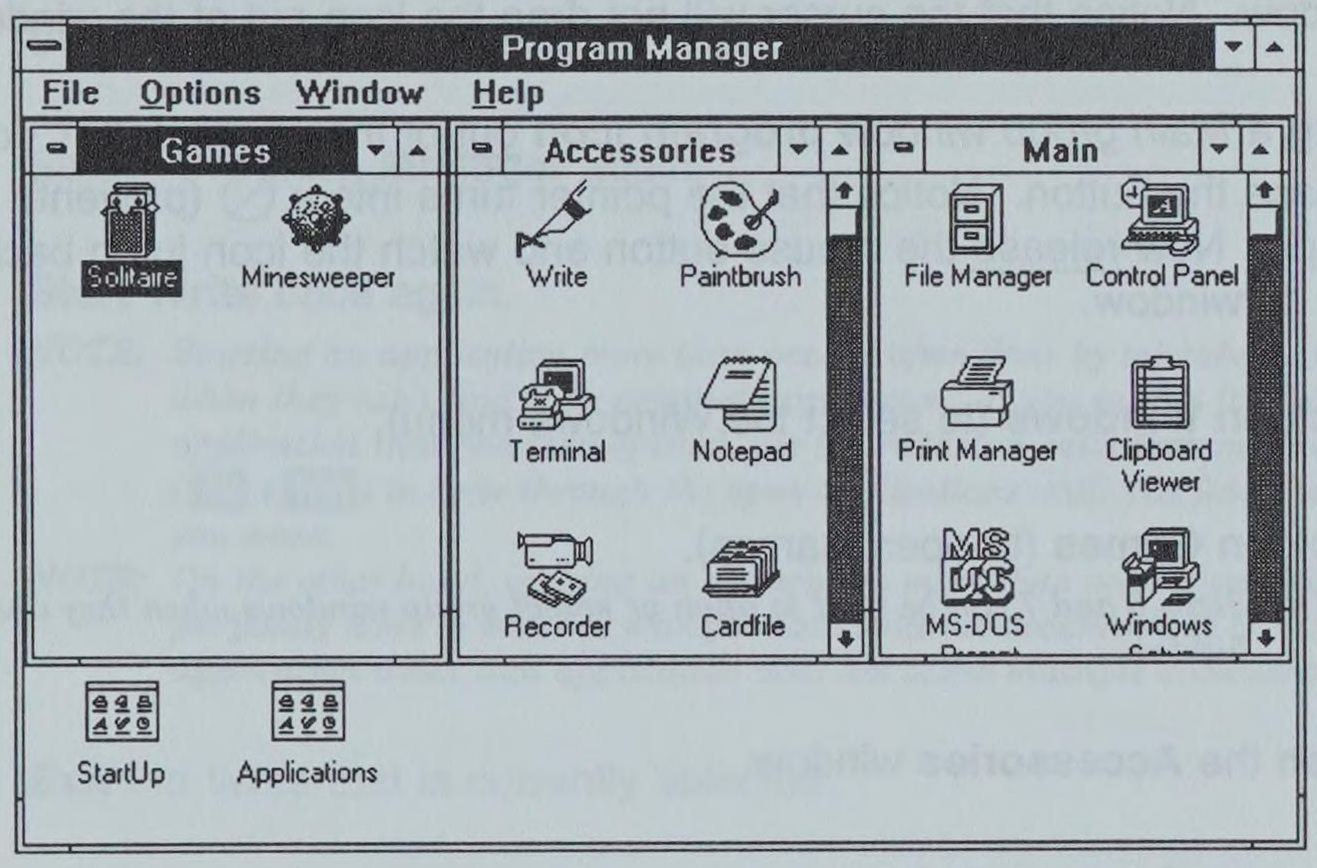
Continue Exercise 18 on the next page

5
- **Click** on **Windows**.
- **Click** on **Tile**.

OR

- **Press** Shift + F4.
  (shortcut keys to tile windows)

Tiled Group Windows



6 **Close** the **Games** window (review, page 187).

7 **Close** the **Accessories** window (review, page 187).

8 **Arrange** the window to **cascade** (review, page 204).

9 **Size** the **Main** window until no scroll bar is showing.

10 **Exit Windows** (review, page 185).

EXERCISE 18 (continued)
ARRANGE GROUP WINDOWS

tile
to resize and arrange the open group windows side by side within the Program Manager workspace.

EXERCISE 19
Practice

Lesson Two
Windows Basics

Tasks Reviewed:

Start Windows
Move icons
Drag (mouse action)
Use menu bar
Open group windows
Arrange Program Manager
Close group windows
Size a window
Move a window
Exit Windows

1. **Start Windows**.
   (The standard "starting Windows screen" should appear.)

2. **Move** the ***group window icons***, located at the bottom of the Program Manager window, around a little.

3. **Arrange icons** by using the menu command.

4. Try to **drag** one of the *group window icons* out of the Program Manager window. Notice that the cursor will not drag the icon out of the window.

5. **Drag** a *Main group window* **program icon** out of the window BUT do not release the button. Notice that the pointer turns into a ⃠ (prevent) shape. Now release the mouse button and watch the icon jump back into its window.

6. **Click** on **Windows** (to select the Windows menu).

7. **Click** on **Games** (to open Games).
   *NOTE: Steps 6 and 7 can be used to **open** or **select** group windows when they are hidden.*

8. **Open** the **Accessories** window.

9. **Open** the **Startup** window.

10. **Arrange** the **group windows** in a **tile** format.

11. **Arrange** the **group windows** in a **cascade** format.
    *NOTE: You may have to size the Program Manager window taller so the group windows will **cascade** correctly.*

12. **Close** the **Accessories**, **Games**, and **Startup** windows.

13. **Size** the **Main** window, making it tall enough to display all the *program icons* without scroll bars showing.

14. **Move** the **Program Manager** window to the bottom center of the screen.

15. **Move** the **Main** window to the right until only half of it shows.

16. **Move** the **Program Manager** window back to its original position (center of the screen) and size it to its original size, if necessary.

17. **Move** the **Main** window back to its original position (on the left edge and just under the menu bar).
    *NOTE: If there are **scroll bars** in the Program Manager window, move the **bottom scroll box** to the left side and the **right scroll box** to the top, and the scroll bars should disappear.*

18. **Exit Windows**.

EXERCISE 20
Practice

Lesson Two
Windows Basics

Tasks Reviewed:

Start Windows
Open group windows
Select application windows
Start programs
Exit programs
Close group windows
Use the menu bar
Cancel
Exit Windows

1. **Start Windows.**
   (The standard "starting Windows screen" should appear.)
2. **Open** the **Accessories** window.
3. **Start Write.**
4. **Select Program Manager** (page 190).
5. **Start Write** again.
6. **Select Program Manager** again.
7. **Start Write** once again.
   *NOTE: Starting an application more than once is often done by mistake by new users when they can't find their original application. If you cannot find an application that has been opened, use the **rotation selection** method (Alt + Tab) to cycle through the open applications until you find the one you want.*
   NOTE: On the other hand, opening an application more than once is sometimes purposely done in order to transfer data between documents of the same application when that application does not allow multiple document windows.
8. **Exit** the Write that is currently selected.
9. • **Press** Ctrl + Esc (to access the Task List).
   • **Double-click** on one of the Writes.
10. **Exit** this Write.
11. **Select** the last Write that is open.
12. **Exit** this last Write.
13. **Close** the **Accessories** window.
14. **Click** on **Window**.
15. **Cancel** the **menu**.
16. **Click** on **File**.
17. **Click** on **Properties...** .
18. **Cancel** the **dialog box.**
19. **Go** on to Exercise 21.

    OR

    Exit Windows.

EXERCISE 21
Practice

Lesson Two
Windows Basics

Tasks Reviewed:

Start Windows
Open group windows
Start programs
Maximize a window
Select an application
Minimize application windows
Restore application windows
Exit programs
Exit Windows

1. **Start Windows**, if necessary.
2. **Open** the **Accessories** group window.
3. **Start Calculator**.
4. **Select Accessories** and **start Paintbrush**.
5. **Maximize Paintbrush**.
6. **Select Calculator** using the **rotation** method.
   (It appears in Paintbrush's workspace but it is not really within Paintbrush; rather, it has moved in front of the Paintbrush window.)
7. **Select Program Manager**.
8. **Select Paintbrush**.
9. **Minimize Paintbrush** (it becomes a "running" icon).
10. **Select Calculator**.
11. **Minimize Calculator** (it becomes a "running" icon).
12. **Minimize** the **Program Manager** (it becomes a "running" icon).
13. **Restore** (double-click on) the **Program Manager**.
14. **Restore Paintbrush** (to enlarge the icon to a window).
15. **Restore Paintbrush** again (to resize the window).
16. **Exit Paintbrush**.
17. **Restore Calculator**.
18. **Exit Calculator**.
19. **Close Accessories**.
20. **Go** on to Exercise 22.

    OR

    Exit Windows.

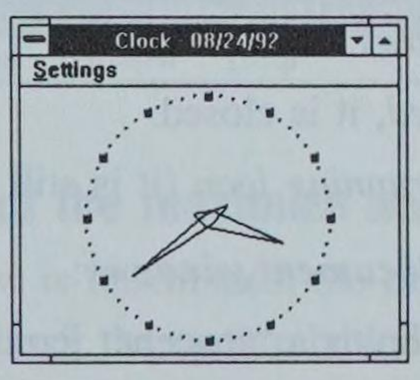
EXERCISE 22
Practice

Lesson Two
Windows Basics

Tasks Reviewed:

Start Windows
Open group windows
Start programs
Use menu bar
Size a window
Move a window
Maximize a window
Select a window
Exit Windows

1. **Start Windows**, if necessary.
2. **Open** the **Accessories** window.
3. **Start Clock**.
4. **Click** on **Settings**.
5. **Click** on **Digital** (to select it).
6. **Size** the **Clock window** to about 3" wide by 1" high.
7. **Move Clock** to the bottom right corner of the desktop.
8. **Start** and **maximize Write**.
9. **Select Clock** (since it is hidden, use the **rotation** method, page 190).
10. **Click** on **Clock's** ▭.
11. IF *Always on Top is* deselected (i.e., there is no ✓ by it), then **click** on **Always on Top**.
12. **Exit Write**.
13. **Open Paintbrush**, and then **maximize** it.
    NOTE: Clock stayed on top.
14. **Restore Paintbrush**, and then **Exit Paintbrush**.
15. RETURN CLOCK TO ITS ORIGINAL STATE:
    - **Click** on **Settings**, and **select Analog**.
    - **Click** on **Settings**. IF Seconds is *deselected*, **select** it.
      OR, IF Seconds is *selected*, **click** off of the menu.
    - **Click** on Settings. IF Date is *deselected*, **select** it.
      OR, IF Date is *selected*, **click** off of the menu.
    - **Size** the clock to about 2" by 2".
    - **Click** on ▭, and **deselect *Always on Top***.
    - **Move** the clock to the top left corner of the screen.



16. **Exit Windows.**

Lesson Two
Review of Windows Basics Exercises

Lesson Two (Windows Basics) covers tasks that:

Start and Exit Microsoft Windows.

Open and Close Group Windows.

Start and Exit Program Windows.

Select Application and Document Windows.

Use the Menu Bar and Choose Commands from Menus.

Cancel Menus, Dialog Boxes, and Windows.

Maximize, Minimize, and Restore Windows.

Move, Size, and Arrange Windows.

Scroll through Windows.

Move and Arrange Icons.

POINTS TO EMPHASIZE

Compare and Contrast

Application Windows and **Document Windows** and **Group Windows**:

- Application windows hold running programs.
- Document windows are windows within an application window.
- Group windows are a special kind of document window that are used only within the Program Manager window.

Choose and **Select**:

- *Choose* means to pick an item from a menu to initiate an action.
- *Select* means to mark an item so that a subsequent action can activate it.

Exit and **Close**:

- The Exit command is usually found in the File menu (only in application windows).
- The Close command is usually found in the Control menu (in application *and* document windows).
- Both Exit and Close are commands that let you leave windows.

Start and **Open**:

- *Start* usually refers to beginning *application windows* (programs).
- *Open* usually refers to beginning *document* and *group windows*.

Minimize *Group Windows* and **Minimize *Application Windows***:

- When a *group window* (or document window) is *minimized*, it is closed.
- When an *application window* is *minimized*, it becomes a *running icon* (it is still open).

Control box for *application windows* and **control box for *document windows***:

- The control box for *application* and *dialog box* windows holds a "spacebar icon" ▭ (longer).
- The control box for *group* and *document* windows holds a "hyphen icon" ▭ (shorter).

Continued ...

Important Skills

- Canceling (backing out of or exiting) unwanted menus, dialog boxes, and windows (see page 63).
- Selecting icons, windows, and menu items.
- Being able to find "hidden" windows.
- Using the mouse to **click** or **double-click** on an item, and to **drag** an item.

Three methods to *select* application windows

- Click on window with mouse (use only for windows that can be seen).
- Rotation method (rotates through each open window one at a time).
- Task list method (lists all open windows).

Three methods to *select* group windows

- Click on window with mouse (use only for windows that can be seen).
- Rotation method (rotates through each open window one at a time).
- Click on Windows, then click on the desired document window.

Different ways selected items may be displayed

- a highlighted title bar, icon name, or menu item.
- a check mark on a menu item.
- a dotted rectangle around an option.
- a highlighted border around a dialog box option.

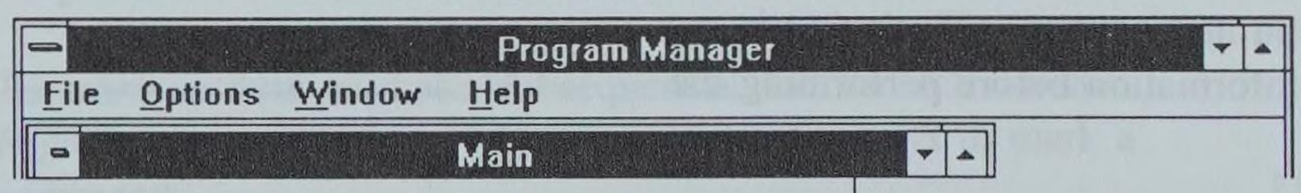
The double-click mouse action

- the action must be quick and precise.
- the mouse must remain stationary when you press the button.

The title bar of a maximized document window

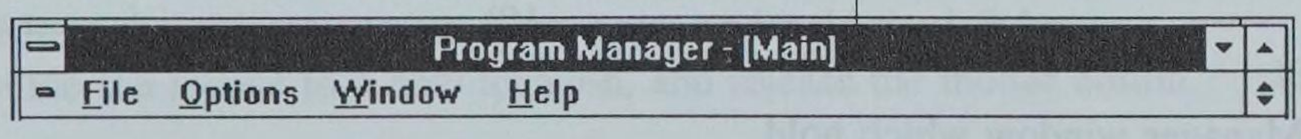
When a document window is maximized, it shares the title bar and menu bar of the application it is in.

Title bar before window is maximized



"Main" window title

Title bar after window is maximized



The relationship of the maximize and restore buttons

When a window is maximized, the maximize button is replaced with a restore button ( ); and when a window is restored, the restore button is replaced with a maximize button ( ).

WORKSHEET 16

WINDOWS BASICS — TERMS

NAME _____

DIRECTIONS: Use the following terms to fill in the blanks below.

click	title bar	double-click	group window icons
icon	desktop	control menu	group windows
window	dialog box	control box	

1. The background (screen) on which windows and icons appear. 1) _____

2. A small picture that represents an element such as a document, program, group of programs, command, or the pointer. 2) _____

3. The rectangular work area for a task, program, document, or Windows group. There are several kinds (application, document, group, and dialog). 3) _____

4. The box at the left end of the title bar which opens the Control menu. 4) _____

5. A menu that you can use to manipulate a window. It contains commands such as restore, move, size, maximize, minimize, close, and open. 5) _____

6. The horizontal bar at the top of a window that holds the window's name. 6) _____

7. 1) Move the pointer on the desired item, and
   2) quickly press and release the left mouse button twice. 7) _____

8. A box that appears when a menu item with an ellipsis (...) is chosen. It requests additional information before performing the original command. 8) _____

9. 1) Move the pointer on the desired item, and
   2) quickly press and release the left mouse button. 9) _____

10. Icons at the bottom of the Program Manager window which represent *group windows*. 10) _____

11. Windows within the Program Manager window which hold "groups" of program icons. 11) _____

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WORKSHEET 17

WINDOWS BASICS — TERMS

NAME _____

DIRECTIONS: Use the following terms to fill in the blanks below.

drag	an ellipsis	click off	close a menu	application window
choose	menu bar	group window	program icon	
select	workspace	active window	document window	

1. A picture in a *group window* that represents a program. 1) _____

2. To click outside of an area in order to "back out" of an action. 2) _____

3. The inner part of a window, where the work on an application is 3) _____

4. A window that holds a program. 4) _____

5. The window that you are currently using or that is currently selected. 5) _____

6. A special kind of *document window* that displays program icons that are used to *start* programs. 6) _____

7. The bar located under the title bar on application windows that lists the available *menus*. 7) _____

8. A window within an application window. 8) _____

9. To back out of a menu without choosing a command. 9) _____

10. To pick an item from a menu that initiates an action. 10) _____

11. To *mark* an item so that a subsequent action can activate it. *Highlighting* and *using a check mark* are two ways to mark a command. 11) _____

12. Three dots (...) that follow the name of menu items that open a *dialog box* when selected. 12) _____

13. Move the pointer onto an item, press and hold the left button, slide the mouse to a new location, and release the mouse button. 13) _____

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WORKSHEET 18

WINDOWS BASICS — TERMS

NAME _____

DIRECTIONS: Use the following terms to fill in the blanks below.

tile	scroll bar	maximize button	minimize button
scroll box	shortcut keys	dimmed command	double-headed arrow
cascade	scroll arrow	restore button	

1. The shape the pointer takes when it is used to size a window. 1) _____

2. Key combinations that can be used to activate certain commands instead of using menus. 2) _____

3. The box located at the right end of the title bar of a maximized window; it replaces the maximize button when a window is maximized. 3) _____

4. A bar that appears at the right and/or bottom of a window whose contents are not completely visible. 4) _____

5. The arrow at each end of a scroll bar, used to *scroll* through the contents of the window. 5) _____

6. A menu command that is shown in gray instead of black. It cannot be used in the current situation. 6) _____

7. The box located at the right end of the title bar; it is used to enlarge a window to its greatest size. 7) _____

8. The small square in a scroll bar that shows the position of the information *displayed* in relation to the *entire contents* of the window. 8) _____

9. To layer and resize the open group windows so that the title bar of each group window is visible. 9) _____

10. The box located at the right of the title bar (just before the maximize button) and used to shrink a window to an icon. 10) _____

11. To resize and arrange the open group windows side by side. 11) _____

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WORKSHEET 19

WINDOWS BASICS — TASKS

NAME _____

DIRECTIONS: Use the following terms to fill in the blanks below.

cancel	start a program	close a group window
use the menu bar	open a group window	select a group window
exit Windows	exit a program	select an application window
start Windows		

1. To enlarge a *group window icon* to a window. 1) _____

2. To leave Microsoft Windows and return the computer to a DOS prompt. 2) _____

3. To begin Microsoft Windows from a DOS prompt and/or (for some systems) by turning the computer on. 3) _____

4. To use Windows to leave a program. 4) _____

5. To use Windows to run a program. 5) _____

6. To reduce a group window to an icon. 6) _____

7. To make an *application window* active. A *highlighted title bar* indicates that a window is active. 7) _____

8. To undo or "back out of" an action. 8) _____

9. To *choose* a menu from the menu bar. 9) _____

10. To make a *group window* active. A *highlighted title bar* indicates that a window is active. 10) _____

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WORKSHEET 20

WINDOWS BASICS — TASKS

NAME _____

DIRECTIONS: Use the following terms to fill in the blanks below.

move icons	arrange icons	scroll through a window
move a window	arrange group windows	restore a window
size a window	minimize a window	maximize a window

1. To shrink a window to an icon. 1 _____

2. To enlarge a window to its greatest size. 2) _____

3. To return a maximized window to its previous size. 3) _____

4. To move through information in a window in order to view parts that are beyond the window's borders. 4) _____

5. To change the dimensions of a window. 5) _____

6. To change the location of a window. 6) _____

7. To use one of Windows' two methods (cascade or tile) to position the open group windows on the screen so that they can all be seen. 7) _____

8. Use the Windows command to distribute group icons in a row at the bottom of the Program Manager's window, or to distribute program-item icons evenly within the selected group window. 8) _____

9. To change the location of group window icons in the Program Manager's workspace and application icons on the desktop. 9) _____

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WINDOWS Lesson Three
Beyond Basics

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EXERCISE 23

Save Desktop Arrangement

Exercises 23 and 24 should be done during the same session.

save desktop arrangement
To save the arrangement of *Program Manager group windows and icons* so that Windows will remember that arrangement when you start Windows the next time.

select
To *mark* an item so that a subsequent action can activate it.

Keyboard Users

SELECT "SAVE SETTINGS ON EXIT"

1. **Press** Alt + O (Options)

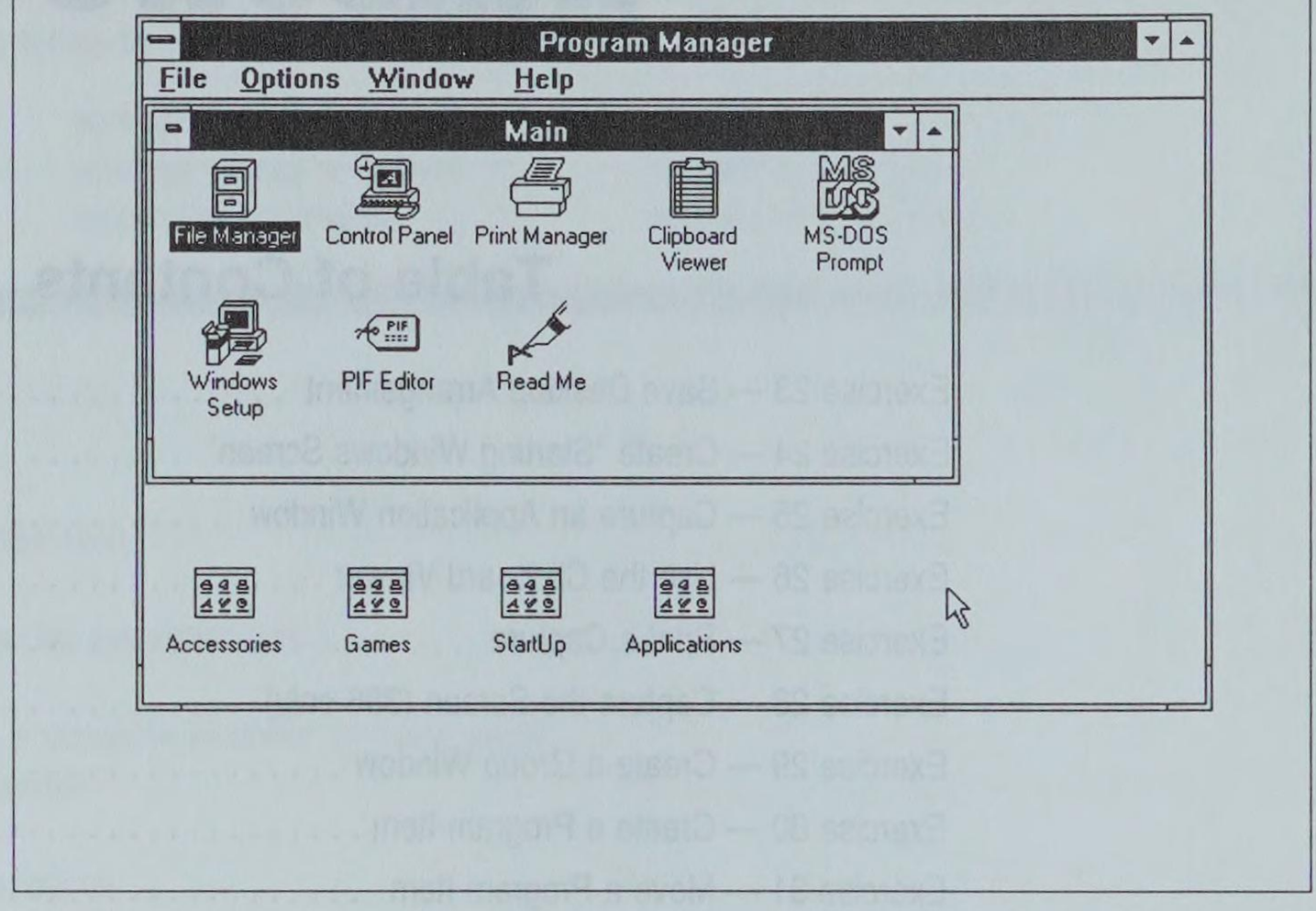
IF ✓ is not next to "Save Settings on Exit":

- **Press** S (Save Settings on Exit)
- **Press** Alt + O (Options) to verify that there is a ✓ by the "Save Setting on Exit" command.

2. **Press** Alt to close the options menu.

1 **Start Windows** (review, page 184), if necessary.

Starting Windows Screen

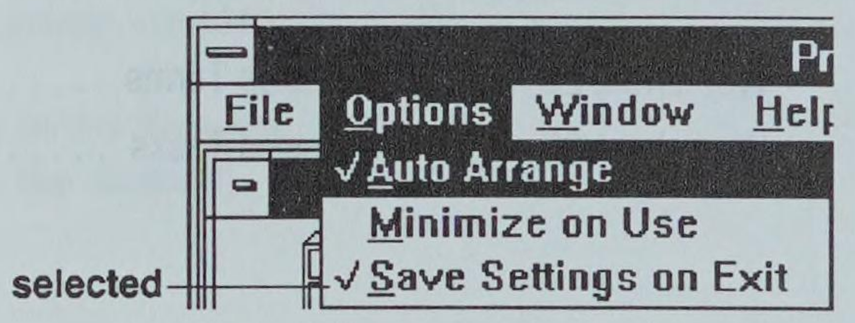


NOTE: After Microsoft Windows is installed, a screen that is arranged like the one above is displayed the first time Windows is started. This exercise explains how to save a new Program Manager desktop arrangement.

2 **SELECT "SAVE SETTINGS ON EXIT" OPTION:**

- **Click** on **Options** (to drop down the menu).

NOTE: When selected, a check mark appears by the "Save Settings on Exit" option.



IF ✓ does **not** appear by "Save Settings on Exit":

- **Click** on **Save Settings on Exit**.
- **Click** on **Options again** (to verify that the option is checked).
- **Click** anywhere off of the Options menu (to **close** it).

OR

IF ✓ **does** appear by "Save Settings on Exit":

- **Click** anywhere off of the Options menu (to **close** it).

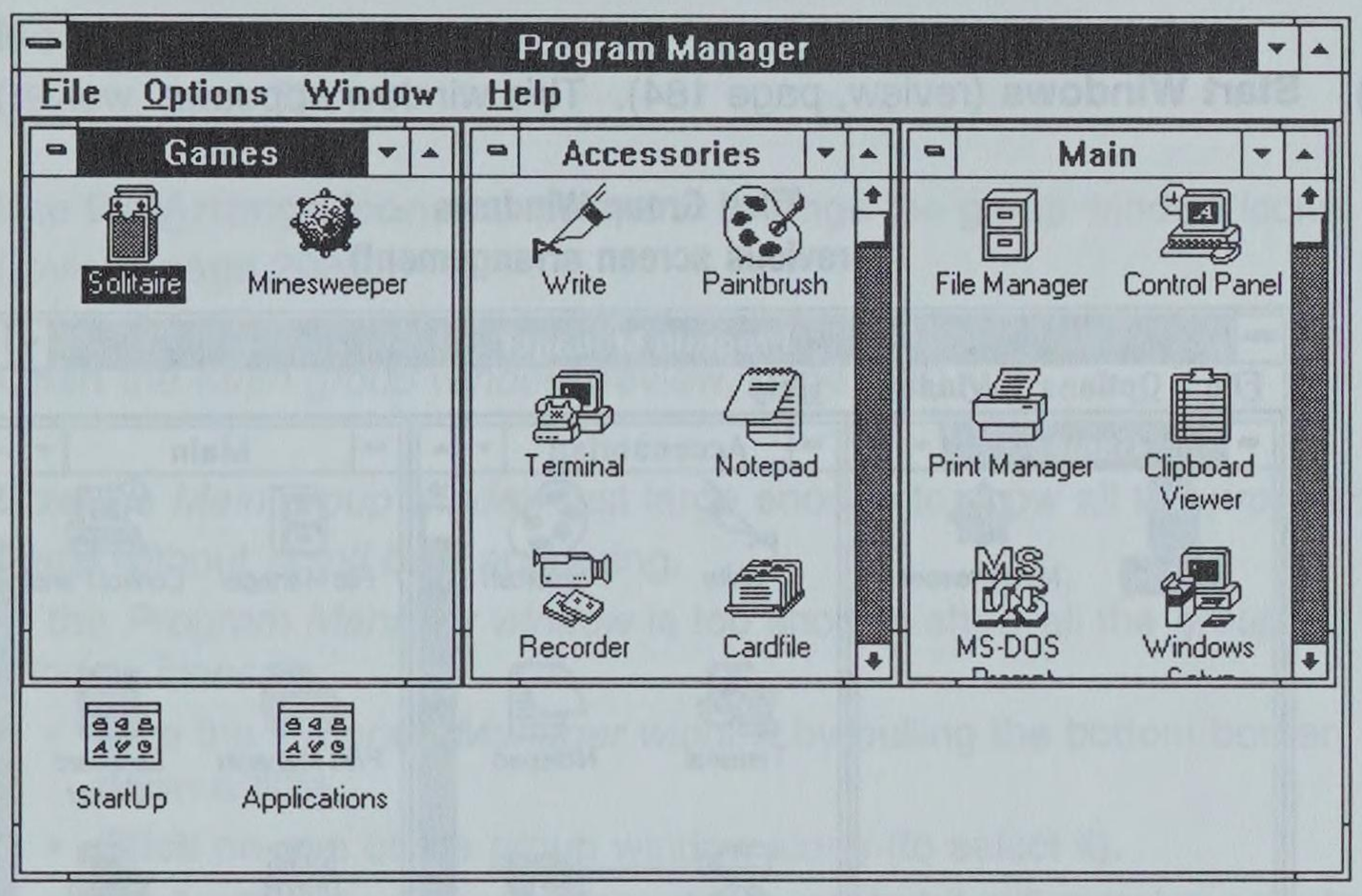
3 **Open** the **Accessories** group window (review, page 186).

4 **Open** the **Games** group window (review, page 186).

Continue Exercise 23 on the next page

5 **Arrange** the *group windows* in a **tile** format (review, page 205).

Tiled Group Windows



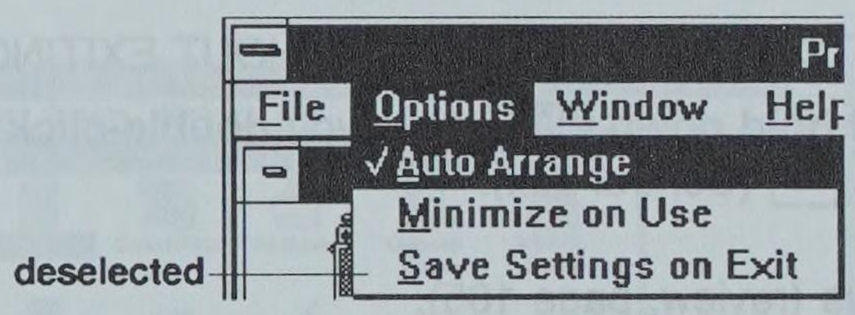
6 **Exit Windows** (review, page 185).

7 **Start Windows** (review, page 184).

NOTE: The screen should appear like that in the illustration above.

8 **DESELECT "SAVE SETTINGS ON EXIT" OPTION:**

NOTE: When deselected, no check mark appears by the "Save Settings on Exit" option.



- **Click** on **Options**.

IF ✓ appears by "Save Settings on Exit":
- **Click** on **Save Settings on Exit**.
- **Click** on **Options again** (to verify that the option is not checked).
- **Click** anywhere off of the Options menu (to **close** it).

OR

IF ✓ does **not** appear by "Save Settings on Exit":
- **Click** anywhere off of the Options menu (to **close** it).

Continue Exercise 23 on the next page

EXERCISE 23 (continued)

SAVE DESKTOP ARRANGEMENT

deselect

To *unmark* an item so that a future action will not activate the item.

WARNING:

The "Save Settings on Exit" menu item should remain deselected, that is, there should not be a ✓ by it.

The reason for this is to avoid disturbing the "starting Windows screen," which is the starting point for exercises in this book.

Keyboard Users

DESELECT "SAVE SETTINGS ON EXIT"

1. **Press** Alt + O (Options)

IF ✓ is next to "Save Settings on Exit":
- **Press** S (Save Settings on Exit)
- **Press** Alt + O (Options) to verify that there is a no check mark on the "Save Settings on Exit" command.

2.
- **Press** Alt (to close the options menu and leave the menu bar active).

OR
- **Press** Esc (to close the options menu and return to the previous active point).

EXERCISE 23 (continued)

SAVE DESKTOP ARRANGEMENT

save desktop arrangement without exiting Windows

A shortcut method to save the current desktop arrangement.

NOTE: The "Save Settings on Exit" option does NOT have to be checked to save the desktop arrangement this way.

NOTE: The reason this book introduces you to the "Save Settings on Exit" command is to make you aware of how it works, so you will not use it unknowingly in the future.

Keyboard Users

SAVE CURRENT DESKTOP ARRANGEMENT WITHOUT EXITING WINDOWS:

Press and hold Shift while you:

- **Press** Alt + F (File)
- **Press** X (Exit)

OR

- **Press** Alt + F4 (shortcut keys)

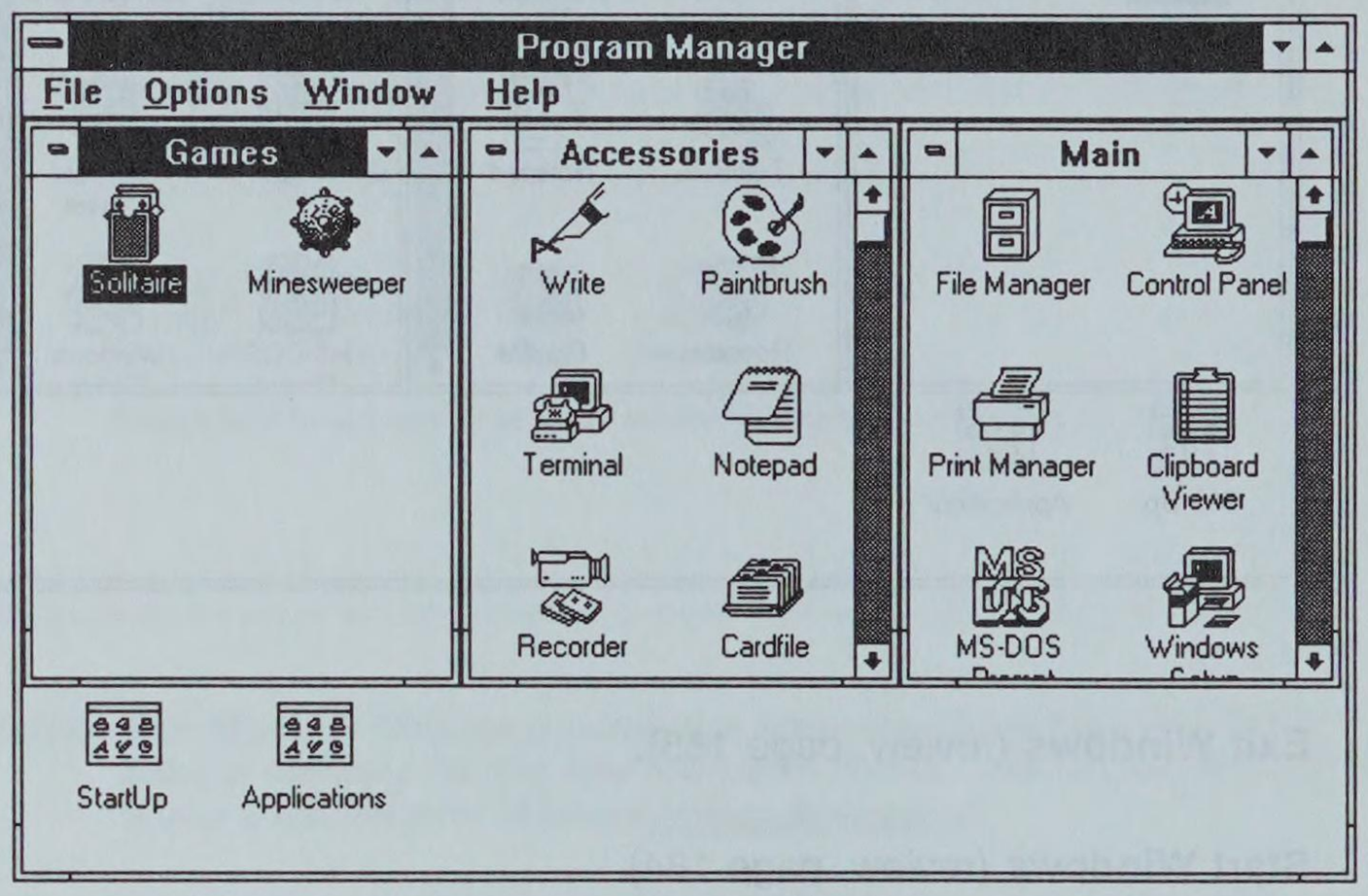
Exercise 23 (continued)

9. **Arrange** the *group windows* in a **cascade** format (review, page 204).

10. **Exit Windows** (review, page 185).

11. **Start Windows** (review, page 184). This window appears:

Tiled Group Windows
(previous screen arrangement)



12. **Arrange** the *group windows* in a **cascade** format again (review, page 204).

13. SAVE DESKTOP ARRANGEMENT WITHOUT EXITING WINDOWS:
    - **Press** and **hold down** Shift while you **double-click** on the Program Manager's ▭ (Control box).

14. **Exit Windows** (review, page 185).

15. **Start Windows** (review, page 184).
    Is the **cascade** arrangement displayed?

16. Using **size** and **move** as desired, **arrange** the Program Manager's group windows and icons a different way.

17. Follow step 13 to "save" the desktop arrangement.

18. **Exit Windows** (review, page 185).

19. **Start Windows** (review, page 184).
    Is your new desktop arrangement displayed?

Go on to Exercise 24

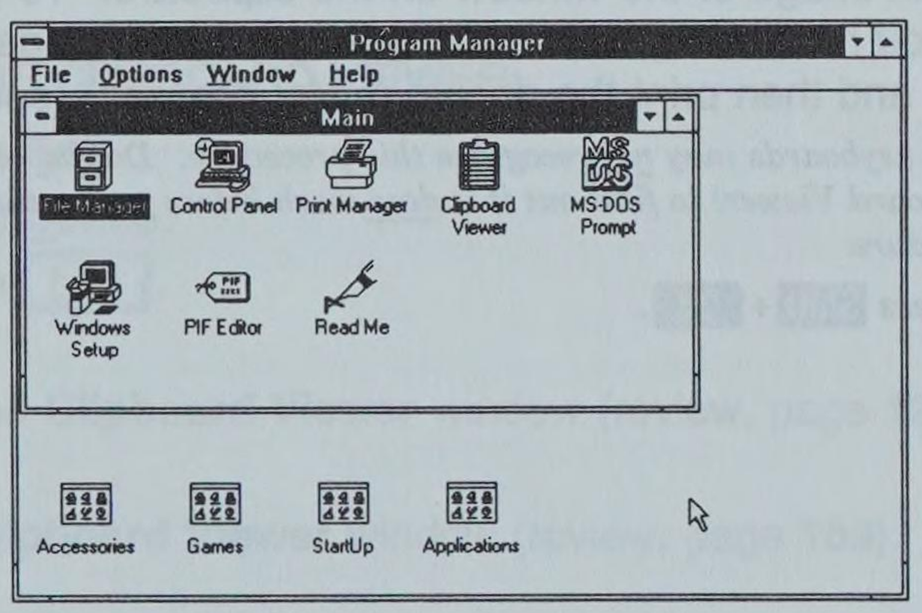
EXERCISE 24
Create "Starting Windows Screen"

Continue from Exercise 23, doing both during the same session.

create "starting windows screen"
To manipulate the Program Manager window, Main group window, and group window icons to approximate Windows' original opening screen.

1. **Close** all of the *group windows* that may be open (review, page 187).
2. **Size** the *Program Manager window* to about the size shown in the illustration below (review, page 201).
3. **Move** the *Program Manager window* to the center of the desktop (review, page 200).
4. Use the **Arrange Icons** command to arrange the group window icons (review, page 203).
5. **Open** the *Main group window* (review, page 186).
6. **Size** the *Main group window* just large enough to show all the *program items* without *scroll bars* appearing.
   IF the *Program Manager window* is too short to show all the *group window icons:*
   - **Size** the *Program Manager window* by pulling the bottom border down a little.
   - **Click** on one of the group window icons (to select it).
   - **Click** off of the icon (to close the menu but it still remains selected).
   - **Arrange Icons** using the command.
7. **Move** the *Main group window* to fit in the Program Manager window as shown below.
8. Make any necessary adjustments to match your screen to the illustration below.

Starting Windows Screen



9. **Save the desktop arrangement without exiting Windows** (Review, page 220, step 13).
10. **Go** on to Exercise 25.

OR

Exit Windows (review, page 185).

EXERCISE 25
Capture an Application Window

Exercises 25, 26, and 27 should be done during the same session.

capture an application window
To copy an image of the active application window onto the clipboard.

IMPORTANT: There are two kinds of captures. An application window capture and a screen capture. The application window capture is done in this exercise. The screen capture is done in Exercise 28 (screen captures can be performed only in the 386 enhanced mode).

clipboard
A temporary storage area used to hold information that is being transferred from one program (or document) to another. The clipboard is also used to hold application window and screen captures.

capture (verb)
To perform the keystrokes to copy the image that is visible on your monitor, either an application window or an entire screen, onto the clipboard.

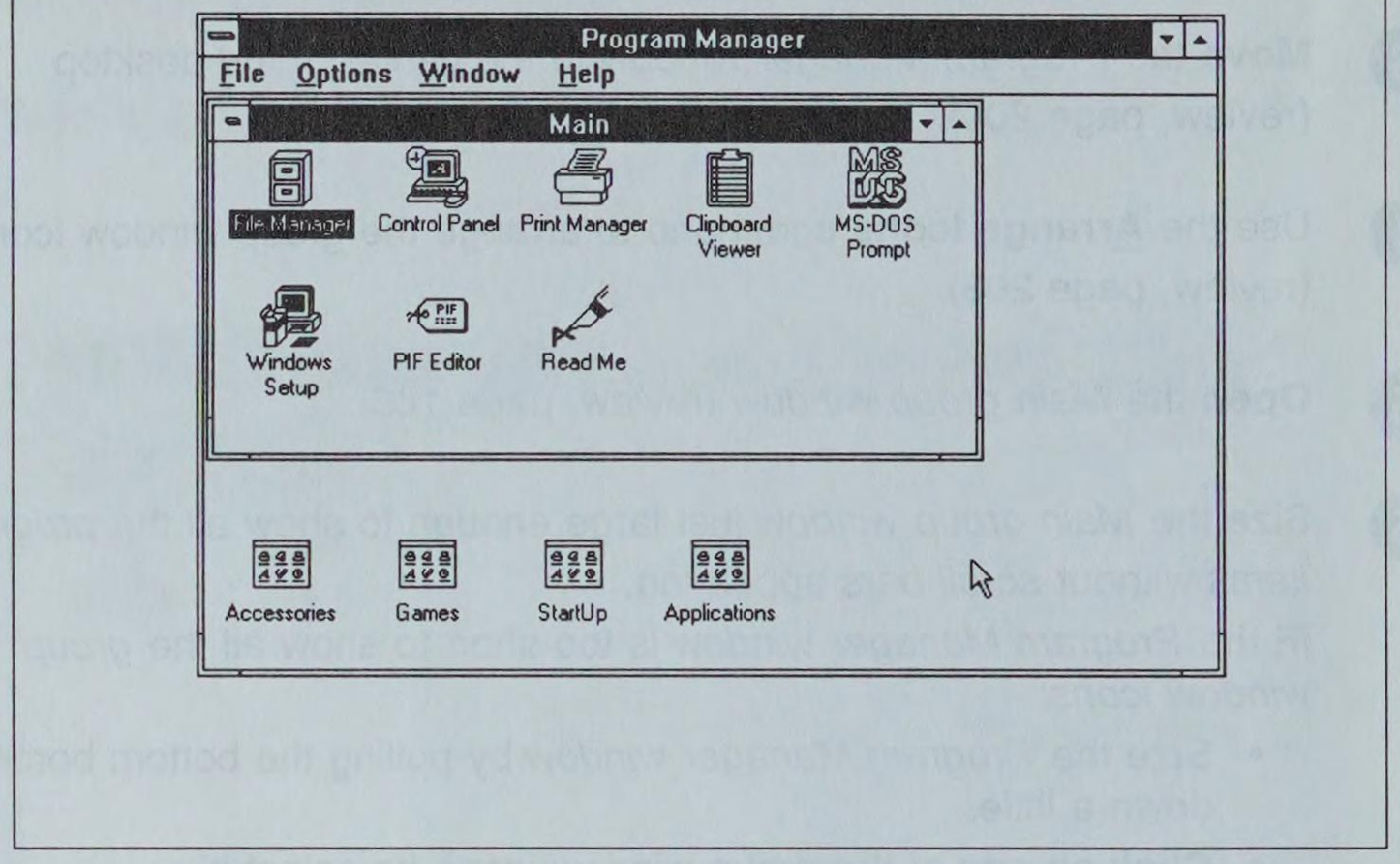
capture (noun)
The image of an application window or the entire screen that has been copied onto the clipboard.

Keyboard Users

CAPTURE AN APPLICATION WINDOW
See Step 2.

1 **Start Windows** (review, page 184), if necessary.

Starting Windows Screen



NOTE: This exercise instructs you to capture the Program Manager window. Other application windows can be captured if you first:
- ***Select** the desired window, and then*
- *Continue with step 2 below.*

2 **Press** Alt + Prnt Scrn (capture an application window).

Nothing seems to happen, but if all went right, an image of the Program Manager window was captured and placed on the *clipboard*. Go on to Exercise 26.

IMPORTANT: Using Alt + Prnt Scrn does not print the window, but only "captures" an image of the window on the clipboard. To print the "capture," you must first *paste* the image from the clipboard into Write (or Paintbrush) and then print the document (or drawing) (see page 224).

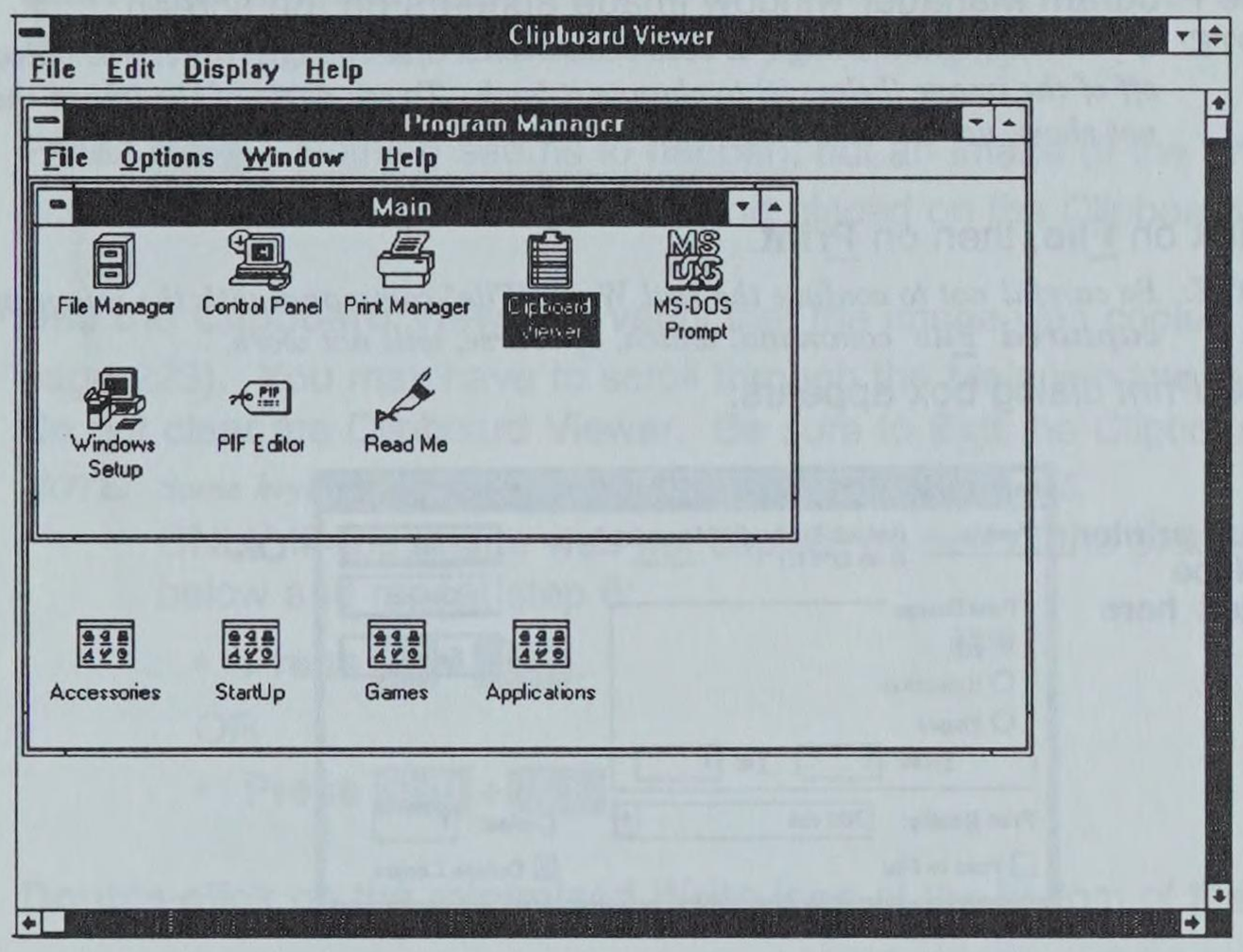
NOTE: Some keyboards may not recognize this procedure. Do the next exercise (Use the Clipboard Viewer) to find out if it does work before trying this alternate procedure:
- ***Press** Shift + Prnt Scrn.*

Go on to Exercise 26

1. **Start** the **Clipboard Viewer** (located in the Main group window) (review, page 188).

2. **Maximize** the **Clipboard Viewer** (review, page 196).
Does your screen look like the illustration below?

Maximized Clipboard Viewer Showing Captured *Program Manager* Window



ONLY IF the Clipboard Viewer does not display an image of the Program Manager window:

- **Exit** the **Clipboard Viewer** window (review, page 189).
- Perform the option shown in the NOTE for step 2 of Exercise 25 and continue from there.

3. CLEAR THE CLIPBOARD VIEWER:
   - **Click** on **Edit**.
   - **Click** on **Delete**.
   - **Click** on [Yes].

4. **Restore** the **Clipboard Viewer** window (review, page 197).

5. **Exit** the **Clipboard Viewer** window (review, page 189).

6. **Capture** the **Program Manager** window again (press Alt + Prnt Scrn).

7. **Use** the **Clipboard Viewer** to see if the window was captured, but DO NOT **CLEAR** THE CLIPBOARD VIEWER.

8. **Exit** the **Clipboard Viewer** (review, page 189).

Go on to Exercise 27

EXERCISE 26
Use the Clipboard Viewer

Continue from Exercise 25, doing Exercise 25-27 during the same session.

use the Clipboard Viewer

To *open* the Clipboard Viewer window and *view*, *save*, *open*, or *delete* clipboard images; and then *close* the Clipboard Viewer. The Clipboard Viewer lets you see if you successfully captured a window or screen.

Clipboard Viewer

A program that lets you *view* the contents of the clipboard. You can also *save* or *delete* the contents of the clipboard, or *open* a previously saved clipboard image.

Keyboard Users

USE THE CLIPBOARD VIEWER

1. **Start** Clipboard Viewer (review, p.188).
2. **Maximize** the window (review, p.196).
3. Clear the Clipboard Viewer:
   - **Press** Alt + E (Edit)
   - **Press** D (Delete)
4. **Restore** Clipboard Viewer (review, p.197).
5. **Exit** Clipboard Viewer (review, p.189).

EXERCISE 27
Print a Capture

Continue from Exercise 26, doing Exercises 25-27 during the same session.

ASSUMPTION:

It is assumed that your printer has been properly installed and that it will print graphics.

print a capture
To "paste" the contents of the clipboard into a program and then print it.

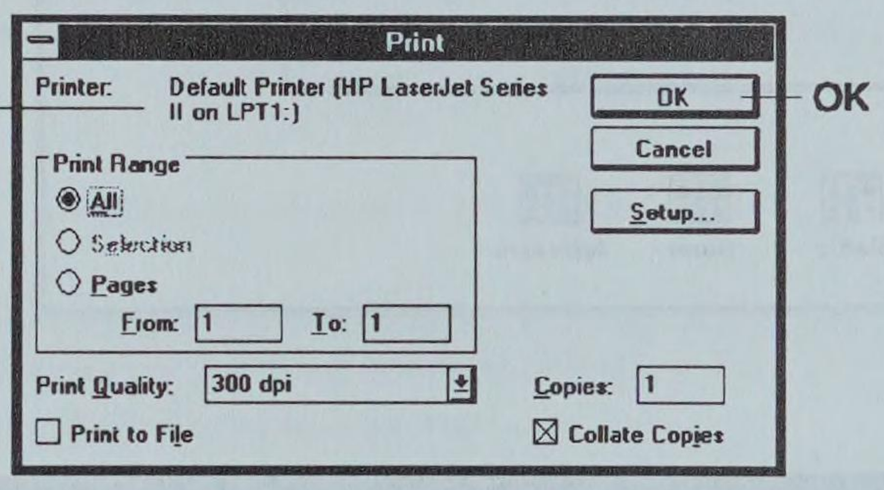
paste
To *copy* information from the clipboard into a program.

Keyboard Users

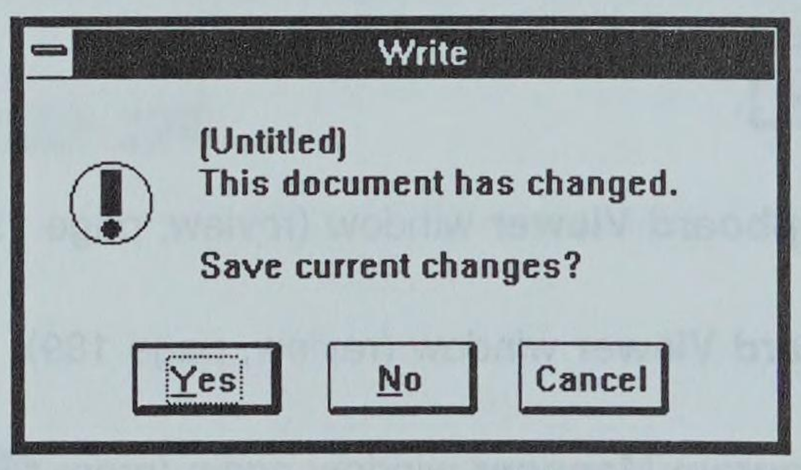
PRINT A CAPTURE

1. **Start** Write (review, p.184).
2. **Maximize** the window (review, p.196).
3. Paste clipboard image:
   - **Press** Alt + E (Edit)
   - **Press** P (Paste)
4. Print document:
   - **Press** Alt + F (File)
   - **Press** P (Print)
   - **Press** ↵
     (to accept the default of OK to print)
5. **Restore** Write's window (review, p.197).
6. Close Write:
   - **Press** Alt + F4 (Close)
   - **Press** N (No)
     (No, you do not want to save the document.)

1. **Open** the **Accessories window** (review, page 186).
2. **Start Write** (review, page 188).
3. **Maximize Write's window** (review, page 196).
4. **Click** on **Edit**, then on **Paste**.
   The Program Manager window image appears on the screen.
   NOTE: If you click on the image, it becomes selected and changes to reverse video. Click off of the image (below it) to change it back. To see parts of the image that may not show, use the scroll bar.
5. **Click** on **File**, then on **Print**.
   *NOTE: Be careful not to confuse the real Write "File" command with the image of the **captured** "File" command, which, of course, will not work.*
   The *Print* dialog box appears:



6. Make sure the printer is ready to receive data.
7. **Click** on OK (to print).
8. **Restore Write's window** (review, page 197).
9. **Double-click** on the Control box for **Write**.
   The *Write* dialog box appears:



10. **Click** on No.
    (You do not want to save the document.)
11. **Close** the **Accessories window** (review, page 187).
12. **Go** on to Exercise 28.

    OR

    Exit Windows (review, page 185).

1. **Start Windows** (review, page 184), if necessary.

FROM THE *STARTING WINDOWS* SCREEN:

2. **Open** the **Main window** (review, page 186).

3. **Arrange** the *group windows* in a **tile** format (review, page 205).

4. **Start** and **minimize Write**.
   NOTE: It becomes an application icon that is still running (open).

5. **Press** Prnt Scrn. Nothing seems to happen, but an image of the *entire screen* should have been captured and placed on the Clipboard.

6. **Use the Clipboard Viewer** to verify that the image was copied (review, page 223). You may have to scroll through the Main window to find it. Do not clear the Clipboard Viewer. Be sure to **Exit** the Clipboard Viewer.
   NOTE: Some keyboards may not recognize the procedure in step 5.
   ONLY IF the image was not copied, try one of the procedures below and repeat step 6:
   - **Press** Alt + Prnt Scrn.

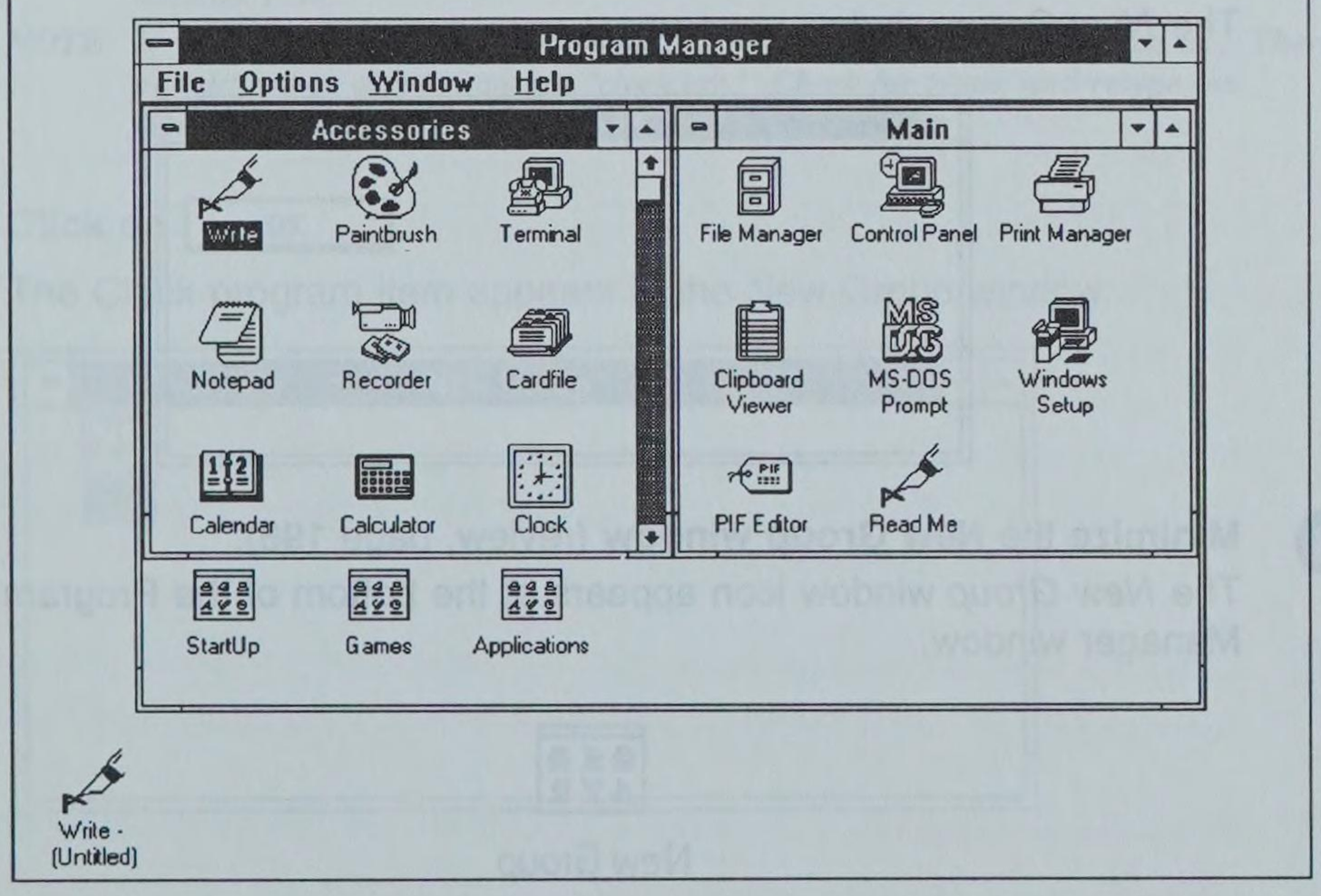
   OR
   - **Press** Shift + Prnt Scrn.

7. **Double-click** on the **minimized Write icon** at the bottom of the screen.

8. **Maximize Write** (review, page 196).

9. **Print the capture** (do steps 4-11 on the previous page).
   NOTE: You can use the scroll bar to view the top of the document if desired.

Captured Screen



10. **Exit Windows** (review, page 185).

EXERCISE 28
Capture the Screen (386 only)

capture the screen
To copy an image of the entire screen onto the clipboard.

WARNING: You cannot do this exercise unless Windows is using 386 Enhanced mode.

To check the mode you are using,

From the Program Manager Window:

- **click** on **Help**
- **click** on **About Program Manager**
- a dialog box appears. The third line from the bottom tells you the mode Windows is using, either Standard or 386 Enhanced.

NOTE: The default margin settings in Write may not allow the entire width of the captured screen to print. The right side may be cut off a little.

Keyboard Users

CAPTURE THE SCREEN
See Steps 5 and 6.

EXERCISE 29
Create a Group Window

Exercises 29-34 should be done during the same session.

create a group window
To make a new group window.

group windows
Windows within the Program Manager window that hold "groups" of *program items*.

option buttons
Circles in a dialog box from which you may select only one of a *related* group.

text box
A box that provides space for typing information needed to carry out a command.

Keyboard Users

CREATE A GROUP WINDOW

1. **Press** Alt + F (File)
2. **Press** N (New)
3. **Press** G (Program Group)
4. **Press** ↵
5. **Type:** `New Group`
   NOTE: You may type a different description if you desire.
6. **Press** ↵

1. **Start Windows** (review, page 184).

FROM THE *STARTING WINDOWS* SCREEN:

2. **Click** on **File**.

3. **Click** on **New**.
   The *New Program Object* dialog box appears:

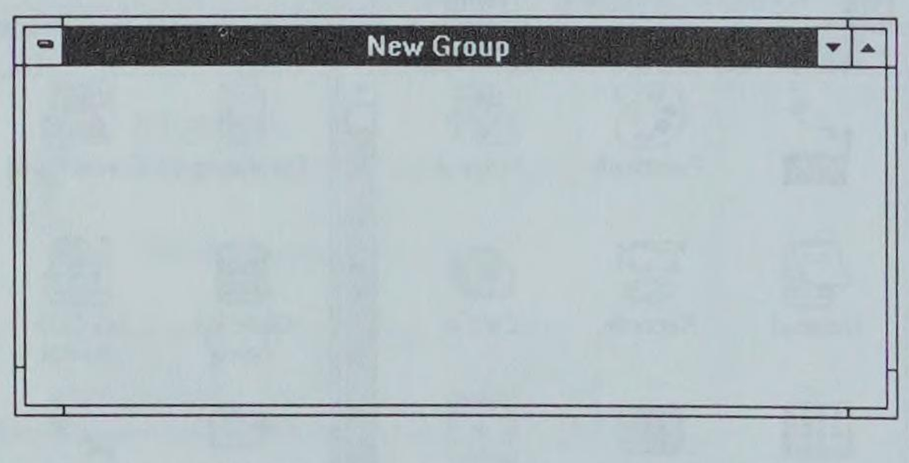
NOTE: When an option button is selected, a dark dot appears inside the circle (◉).

4. **Click** on ○ **Program Group**.
   A dark dot appears inside the circle.

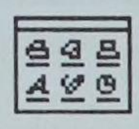
5. **Click** on [OK].
   The *Program Group Properties* dialog box appears with the cursor in the *Description* text box:

6. **Type:** `New Group`
   NOTE: The description you type here will appear in the title bar of the new group window and below the group icon.

7. **Click** on [OK].
   The *New Group* window appears:



8. **Minimize** the **New Group window** (review, page 198).
   The *New Group* window icon appears at the bottom of the Program Manager window.



New Group

NOTE: If the New Group icon does not appear, it is behind the Main group window. Move the Main group window to find it.

Go on to Exercise 30

EXERCISE 30
Create a Program Item

Continue from Exercise 29, doing Exercises 29-34 during the same session.

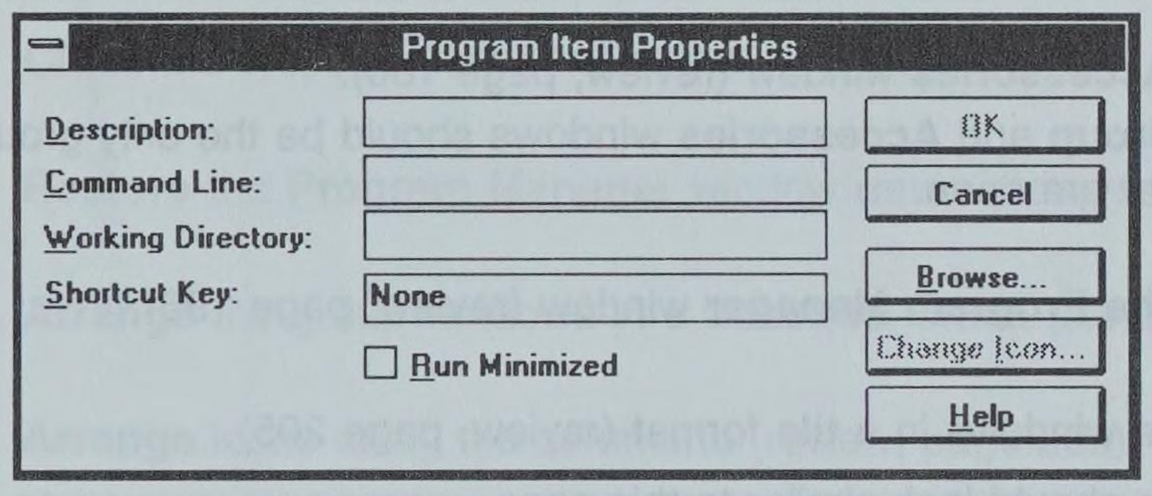
create a program item
To *name* a program item and tell Windows the name of the file that will *execute* (start) that program.

program items
Program items (represented as icons in a group window) are the programs (and sometimes, documents) that make up a *group* in the Program Manager.

*NOTE: When you create a program item, it will be added to the group window that is **selected** (i.e., its title bar is highlighted).*

1. **Open** the **New Group** window (review, page 186).
2. **Click** on **File**.
3. **Click** on **New**.
4. **Click** on ◯ **Program Item**.
5. **Click** on [OK].

   The *Program Item Properties* dialog box appears with the cursor in the *Description* text box:



6. **Type:** `Clock`

   NOTE: You can substitute your own program item description here.

7. **Click** on the **Command Line** text box.

   The *insert* cursor (|) moves to the *Command Line* text box.

8. **Type:** `Clock.exe`

   This is the *file* that "executes" (starts) the *Clock* program.

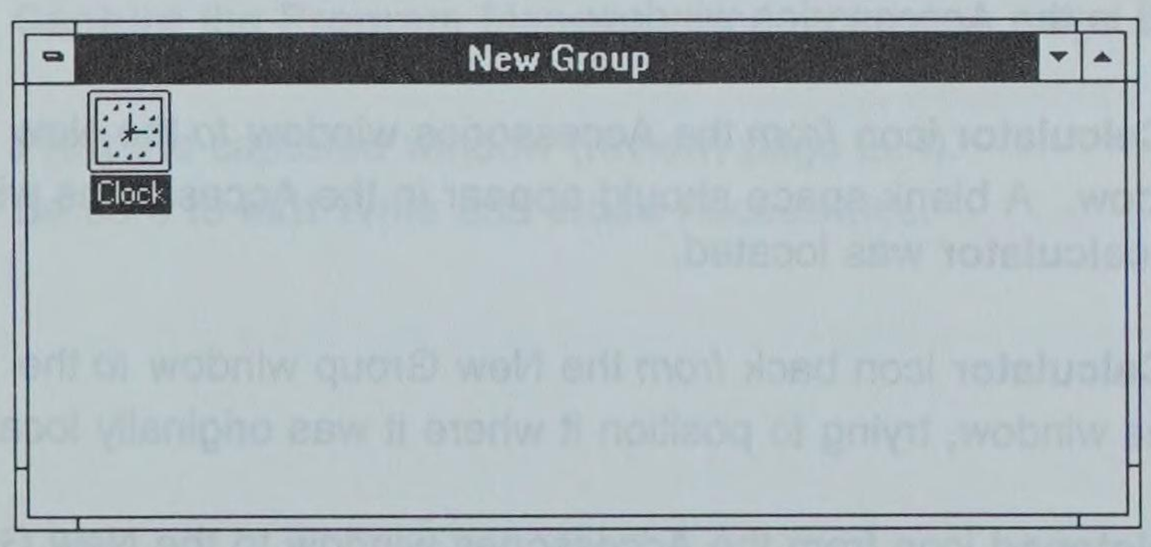
   NOTE: If you are creating a different program item, you should type the name of the file which executes that program in place of Clock.exe.

   NOTE: Other Program Item Properties can be changed from this dialog box, including: Working Directory, Shortcut Keys (create your own), Run Minimized, and Change Icon.

   NOTE: If you get an "Invalid Path" message, check the way you typed clock.exe. There should not be a space within "clock.exe." Check for typos, and retype the "Command Line."

9. **Click** on [OK].

   The Clock program item appears in the New Group window.



Go on to Exercise 31

Keyboard Users

CREATE A PROGRAM ITEM

1. **Press** Alt + F (File)
2. **Press** N (New)
3. **Press** ↵
4. **Type:** `Clock`

   NOTE: You may type a different description if you desire.

5. • **Press** Tab

   OR

   • **Press** Alt + C (Command Line)

6. **Type:** `Clock.exe`

   NOTE: If you use a different program item, type the filename which executes that program here.

7. **Press** ↵

EXERCISE 31
Move a Program Item

Continue from Exercise 30, doing Exercises 29-34 during the same session.

move a program item
To move a *program item* from one program group to another program group.

IMPORTANT:

Auto Arrange (located in the Options menu) should be deselected (no check mark by it) for this exercise (this is the default).

auto arrange
When selected, Auto Arrange automatically rearranges program-item icons every time you move items, add items, or change window size. When deselected, a blank space remains when a program item is moved from a group window.

Keyboard Users

MOVE A PROGRAM ITEM

1. **Open** the group window that has the program item you want to move.
2. **Select** (highlight) the *name* of the program item to be moved by **using arrow keys**.
3. **Press** Alt + F (File)
4. **Press** M (Move)
   (The *Move Program Item* dialog box appears.)
5. Read the information in the dialog box.
6. OPEN THE LIST BOX:
   Press Alt + ↓
7. SELECT GROUP WINDOW TO MOVE PROGRAM ITEM TO:
   Press ↑ and ↓ until the window to move the program item to is highlighted.
8. **Press** ↵

NOTE: Try not to move the program-item icons around so much that you cannot return them to their original group windows. However, if you do have a problem, Appendix I has directions to instruct Windows to rebuild the original group windows.

1. DESELECT AUTO ARRANGE:
   - **Click** on **Options**.

   IF Auto Arrange does not have a check mark by it,
   - **click** off of the menu to close it.

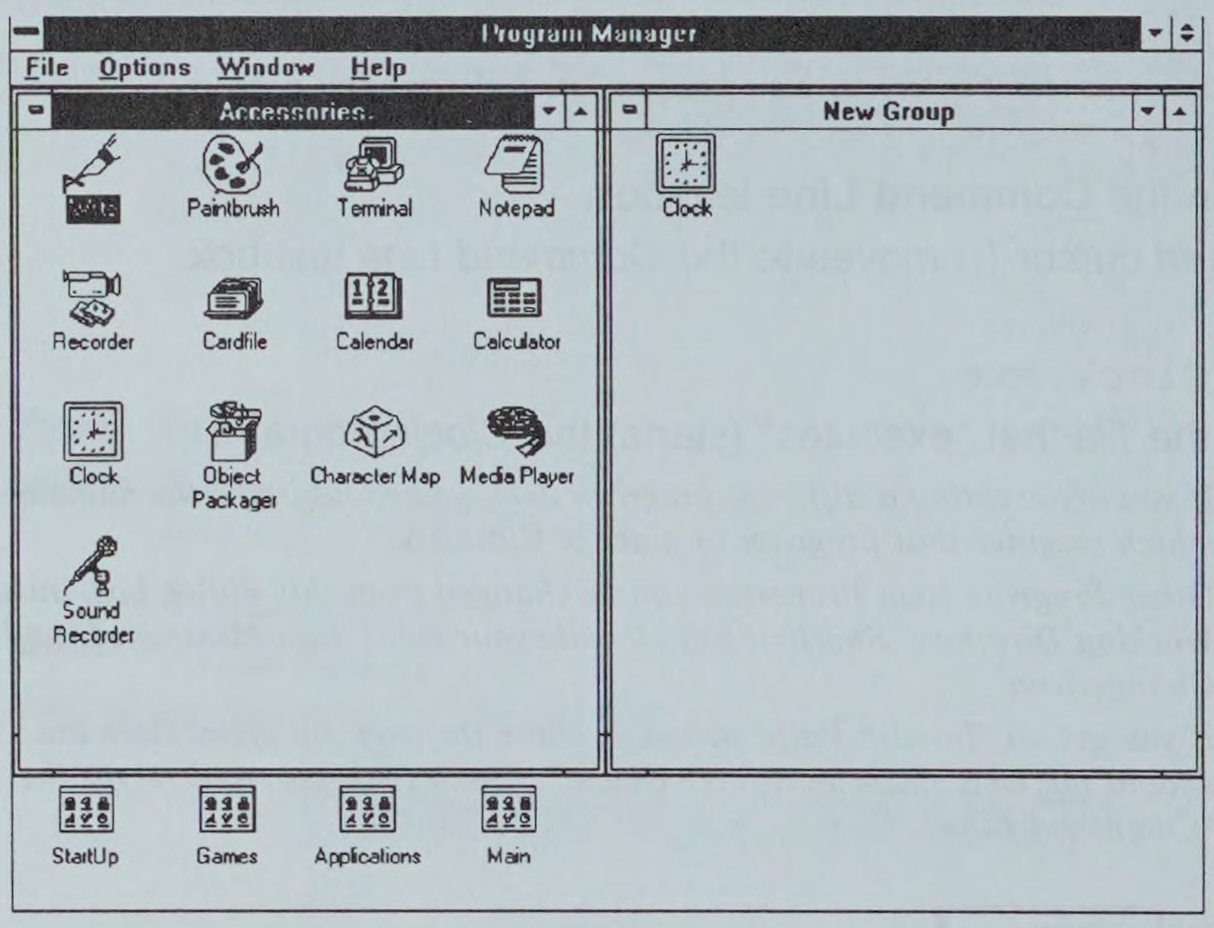
   IF Auto Arrange does have a check mark by it,
   - **click** on **Auto Arrange** to deselect it.

2. **Close** the **Main** window (review, page 187).

3. **Open** the **Accessories** window (review, page 186).
   The **New Group** and **Accessories** windows should be the only group windows that are open.

4. **Maximize** the **Program Manager** window (review, page 196).

5. **Arrange** the windows in a **tile** format (review, page 205).
   Your screen should look similar to this one:



6. Position the pointer on the **Calculator** program-item icon. Notice where it is located in the Accessories window.

7. **Drag** the **Calculator** icon *from* the Accessories window *to* the New Group window. A blank space should appear in the Accessories window where the **calculator** was located.

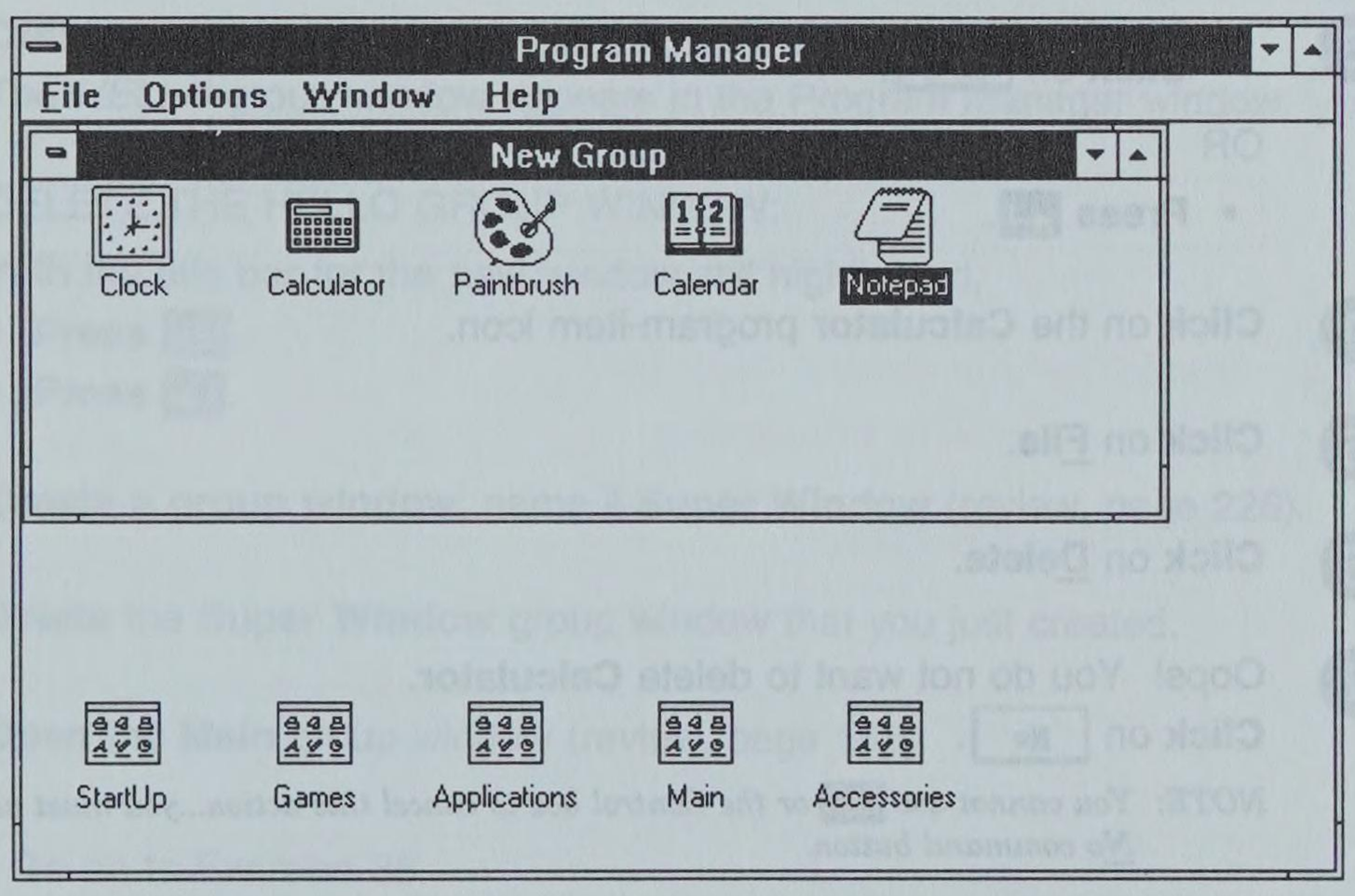
8. **Drag** the **Calculator** icon back *from* the New Group window *to* the Accessories window, trying to position it where it was originally located.

9. **Drag** the **Notepad** icon from the Accessories window to the New Group window.

10. **Drag** the **Notepad** icon back from the New Group window to the Accessories window.

Go on to Exercise 32

1. Position the pointer on the **Calculator** program-item icon.
2. **Press** and **hold down** Ctrl while you **drag** the **Calculator** icon *from* the Accessories window *to* the New Group window.
3. Follow the directions in step 2 above to **copy Paintbrush** to the New Group window.
4. **Copy Calendar** to the New Group window.
5. **Copy Notepad** to the New Group window.
6. **Close** the **Accessories** window (review, page 187).
7. **Restore** the **Program Manager** window (review, page 197).
8. **Arrange** the group windows in a **Cascade** format (review, page 204).
9. **Arrange** icons using the command (review, page 203).
   Your screen should look similar to this:



10. **Capture** the **Program Manager** window (review, page 222).
11. **Print** the captured window (review, page 224).
    Be sure to **exit** Write and **close** Accessories.

Go on to Exercise 33

EXERCISE 32
Copy a Program Item

Continue from Exercise 31, doing Exercises 29-34 during the same session.

copy a program item
To copy a *program item* from one program group to another program group.

IMPORTANT: Whenever you are instructed to copy a program item, remember to hold down Ctrl as you drag the program item.

Keyboard Users

COPY A PROGRAM ITEM

1. **Open** the group window that has the program item you want to move.
2. **Select** (highlight) the *name* of the program-item icon to be moved by **using arrow keys**.
3. **Press** Alt + F (File)
4. **Press** C (Copy)
   (The *Copy Program Item* dialog box appears.)
5. Read the information in the dialog box.
6. OPEN THE LIST BOX:
   Press Alt + ↓
7. SELECT WINDOW TO MOVE PROGRAM ITEM TO:
   Press ↑ and ↓ until the window to move the program item to is highlighted.
8. **Press** ↵

EXERCISE 33
Delete a Program Item

Continue from Exercise 32, doing Exercises 29-34 during the same session.

delete a program item
To delete a *program item* from a program group.

*NOTE: It is easy to accidentally delete the wrong **program item** or **group window**. To avoid this, always read the dialog boxes that appear to be sure you are performing the intended action. (See Appendix J, page 300, to find instructions to rebuild the original group windows.)*

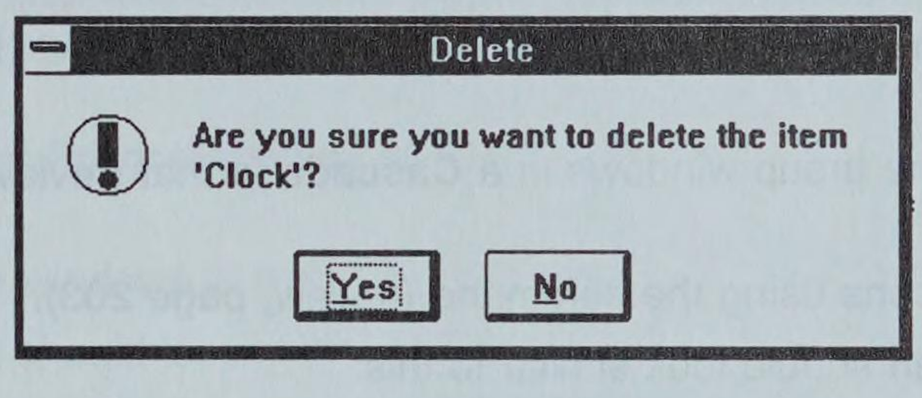
1. • Make sure you are in the New Group window.
   • **Click** on the **Clock** program-item icon (to **select** it).

2. • **Click** on **File**.
   • **Click** on **Delete**.

   OR

   • **Press** Del.

   The *Delete* dialog box appears:



3. • **Click** on Yes.

   OR

   • **Press** ↵.

4. **Click** on the **Calculator** program-item icon.

5. **Click** on **File**.

6. **Click** on **Delete**.

7. Oops! You do not want to delete **Calculator**.
   Click on No.

   *NOTE: You cannot use Esc or the Control box to cancel this action...you must use the **No** command button.*

8. Repeat steps 2 and 3 to **delete** the **Calculator** program item.

9. **Delete** the **Paintbrush** program item.

10. **Delete** the **Calendar** program item.

*NOTE: The **Notepad** program-item icon remains in the New Group window.*

Keyboard Users

DELETE A PROGRAM ITEM

1. **Open** the group window that has the program item you want to delete.
2. **Select** (highlight) the *name* of the program-item icon to be deleted by **using arrow keys**.
3. • **Press** Del

   OR

   • **Press** Alt + F (File)
   • **Press** D (Delete)

   The *delete* dialog box appears.
4. **Press** ↵

Go on to Exercise 34

EXERCISE 34
Delete a Group Window

Continue from Exercise 33, doing Exercises 29-34 during the same session.

delete a group window
To remove a group window from the Program Manager window.

1. **Close** the **New Group** window (review, page 187).
   NOTE: If a group window contains program items, it must be an icon in order to be deleted.

2. **Click** on the **New Group** group window icon (to **select** it).
   IF the Control menu pops up,
   - **Click** off of the icon (to close the menu). Be sure the **New Group's** *icon name* remains highlighted.

3. - **Press** Del.

   OR

   - **Click** on **File**.
   - **Click** on **Delete**.

4. - **Press** ↵.

   OR

   - **Click** on Yes.

   NOTE: If a group window holds program items, they will also be deleted when the group window is deleted.

5. **Create a group window**; name it **HELLO** (review, page 226).
   The *HELLO* group window appears in the Program Manager window.

6. DELETE THE HELLO GROUP WINDOW:
   With the title bar for the new window still highlighted,
   - **Press** Del.
   - **Press** ↵.

7. **Create a group window**; name it **Super Window** (review, page 226).

8. **Delete** the **Super Window** group window that you just created.

9. **Open** the **Main** group window (review, page 186).

10. **Go** on to Exercise 35.

    OR

    Exit Windows (review, page 185).

Keyboard Users

DELETE A GROUP WINDOW

1. **Close** the group window to be deleted.
2. **Press** Ctrl + Tab until the *name* of the group window icon to be deleted is **selected** (highlighted).
3. **Press** Del
   (The *Delete* dialog box appears.)
4. **Press** ↵

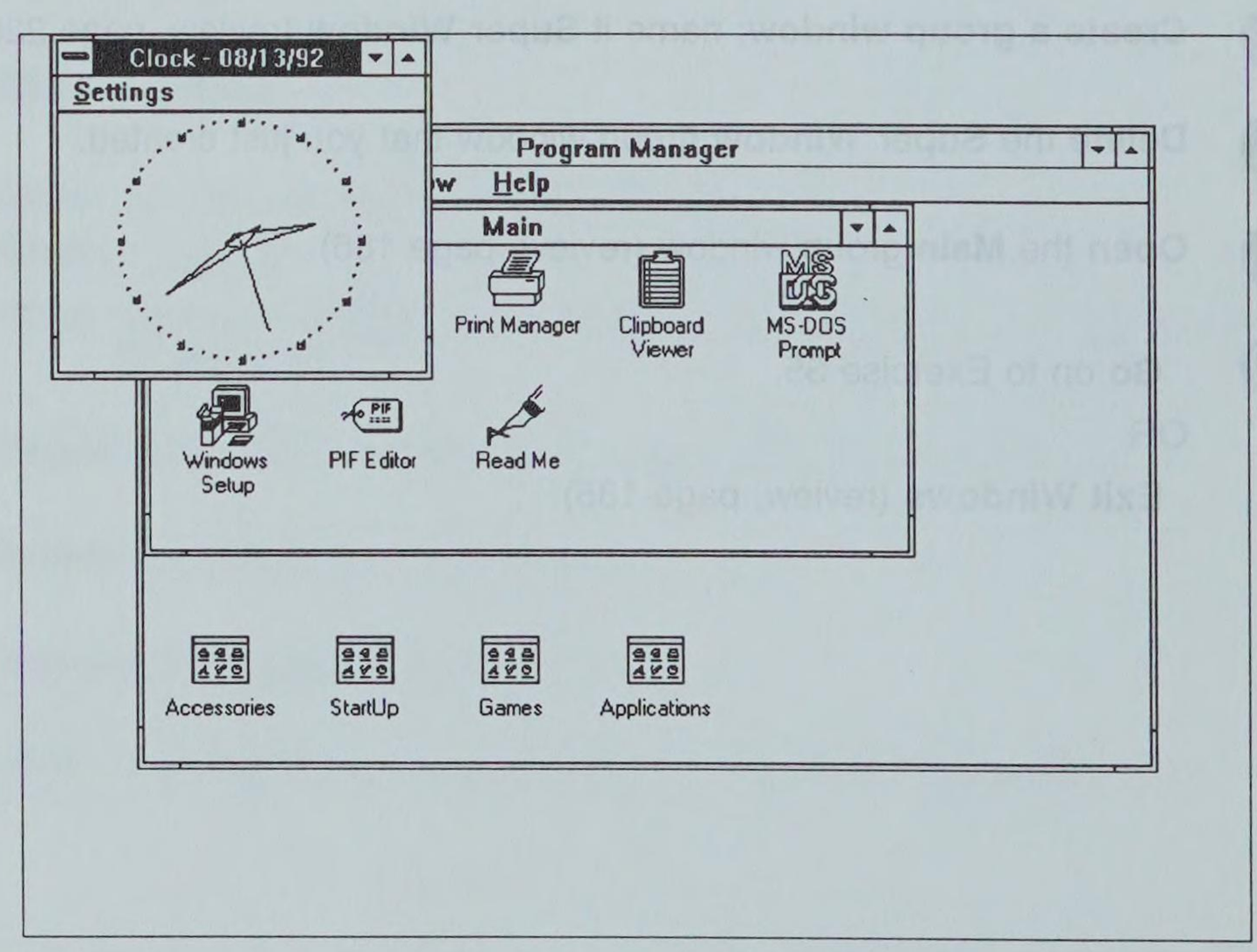
EXERCISE 35

Use the Startup Group

use the startup group
To place a program (or programs) in the *startup* group window so that when you start Windows, that program (or programs) will automatically *start*.

startup group window
A special group window that has been designed so that *programs items* which appear in it *start* when you start Windows.

1. **Start Windows** (review, page 184), if necessary.
2. **Close** the **Main** group window (review, page 187).
3. **Open** the **Accessories** group window (review, page 186).
4. **Open** the **Startup** group window (review, page 186).
   *NOTE: You may have to **move** the Accessories window in order to see the Startup window icon (review, page 200). Or you may **select** the Startup group window using the menu bar or the rotation method (review, page 191).*
5. **Maximize** the **Program Manager** window (review, page 196).
6. **Arrange** the group windows in a **tile** format (review, page 205).
7. **Copy** the **Clock** from the Application window to the Startup window (review, page 229).
8. **Close** the **Accessories** group window (review, page 187).
9. **Close** the **Startup** group window (review, page 187).
10. **Exit Windows** (review, page 185).
    *NOTE: You can exit Windows without closing all the open windows and rearranging disordered icons, and when you start Windows your original desktop arrangement will appear (if "Save Settings on Exit" is deselected—as it should be). If **applications** are open, Windows will warn you before exiting.*
11. **Start Windows** (review, page 184).
    A screen similar to this appears:



NOTE: Because the Clock program item is in the Startup group window, it appears when Windows is started.

Keyboard Users

USE THE STARTUP GROUP

Keyboard instructions to perform each step in this exercise are described on the same review pages shown in the exercise.

Continue Exercise 35 on the next pag

Exercise 35 (continued)

12. **Open** the **Startup** group window (review, page 186).

13. **Delete** the **Clock** program item (review, page 230).

14. **Close** the **Startup** group window (review, page 187).

15. **Exit Windows** (review, page 185).

16. **Start Windows** (review, page 184).
    The Clock does not start when you start Windows this time.

17. **Open** the **Startup** window.

18. **Open** the **Accessories** window.
    IF the Accessories group icon is hidden, **select** it (review, page 191).

19. **Arrange** the Program Manager window in a **tile** format (review, page 205).

20. **Copy Write** from the **Accessories** window to the **Startup** window.

21. **Exit Windows** (review, page 185).

22. **Start Windows** (review, page 184).
    Did **Write** start?

23. **Exit Write**.

24. **Open Startup**.

25. **Delete** the **Write** Program item from the **Startup** window (review, page 230).

26. **Exit Windows** (review, page 185).

EXERCISE 35 (continued)
USE THE STARTUP GROUP

EXERCISE 36
Practice

Lesson Three
Beyond Basics

Tasks Reviewed:

Start Windows
Open group windows
Size a window
Scroll through a window
Start a program
Close group windows
Move a window
Select a window
Capture a window
Use the Clipboard Viewer
Print a capture
Exit a program
Exit Windows

1. **Start Windows**.

2. **Open** the **Accessories** window.

3. Starting with the *right* border of the Accessories window, **size** the window to about half of its width.
   IF necessary, **size** the window longer to match the illustration below.

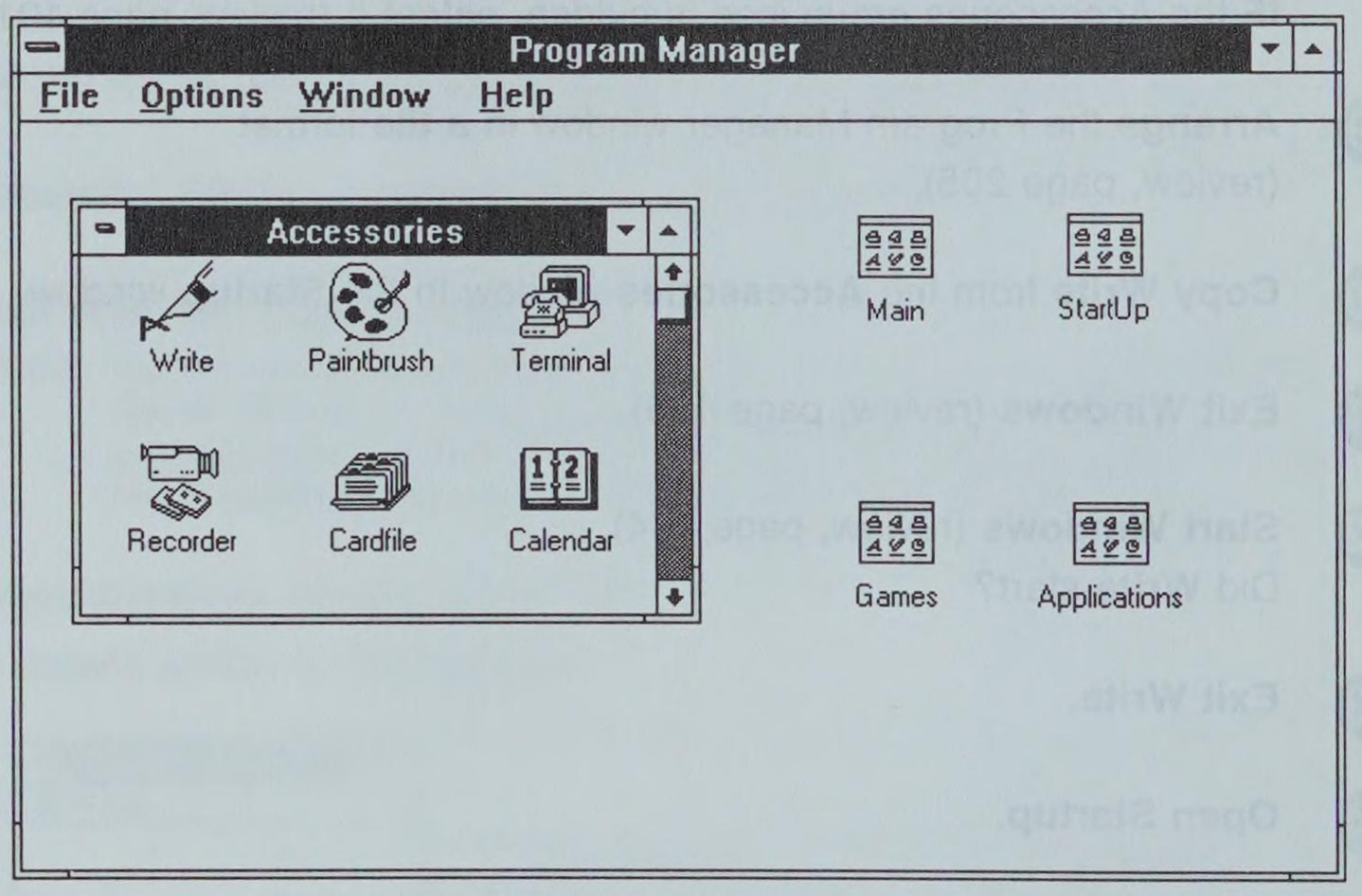
4. **Scroll** through the window from the top to the bottom. Leave it with the *scroll box* at the top of the *scroll bar*.

5. **Close** the **Main** group window.

6. **Move** the **group window icons** as shown below:

   NOTE: If you have additional group window icons, arrange them below the other group icons.

Match This Illustration



7. **Select** the **Accessories** window.

8. **Capture** the **Program Manager** window (review, page 222).

9. **Open** the **Main** group window.

10. **Use** the **Clipboard Viewer** to look at the image. Do not delete the image. **Exit** the Clipboard Viewer.

11. **Select** the **Accessories** window.

12. **Print** the "captured" window using **Write** (review, page 224).

13. **Exit Windows**.

EXERCISE 37
Practice

Lesson Three
Beyond Basics

Tasks Reviewed:

Start Windows
Create a group window
Create a program item
Move a program item
Copy a program item
Delete a program item
Delete a group window
Exit Windows

1 **Start Windows.**

2 CREATE A GROUP WINDOW (review, page 226):

- **Click** on **File**, then **click** on **New**.
- **Click** on ◯ **Program Group**, then **click** on [OK].
- **Type**: `FUN WITH WINDOWS`
- **Click** on [OK].

The new group window appears and is selected (active).

3 CREATE A PROGRAM ITEM (review, page 227):

- **Click** on **File**, then on **New**.
- **Click** on ◯ **Program Item**.
- **Click** on [OK].
- **Type**: `Calculator`
- **Press** Tab, then **type**: `Calc.exe`
- **Press** ↵.

The icon for the new program item appears in the new group window.

NOTE: If necessary, scroll through the Main window to find the program items that are to be moved and copied in steps 4 and 5.

4 MOVE A PROGRAM ITEM (review, page 228):

- **Arrange** the Program Manager in a **tile** format.
- **Move** the **Clipboard Viewer** from the Main window to the FUN WITH WINDOWS window.
- **Move** the **Clipboard Viewer** from the FUN WITH WINDOWS window back to its original position in the Main window.

5 COPY A PROGRAM ITEM (review, page 229):

- **Copy** the **Clipboard Viewer** from the Main window to the FUN WITH WINDOWS window.
- **Copy Readme** from the Main window to the *new* window.

6 DELETE A PROGRAM ITEM (review, page 230):

Delete program items which are in the FUN WITH WINDOWS window:

- **Select** the **Clipboard Viewer** (highlight its name).
- **Press** Del, and then **press** ↵.
- **Delete** the **Readme** program item the same way.
- **Delete** the **Calculator**.

7 DELETE A GROUP WINDOW (review, page 231):

- Be sure that the title bar for the FUN WITH WINDOWS window is highlighted (if you continue from the step above, it should be).
- **Press** Del, and then **press** ↵.
  The *new* group window disappears.

8 **Exit Windows.**

Lesson Three
Review of Beyond Basics Exercises

Lesson Three covers tasks that:

Save the Desktop Arrangement.

Create the "Starting Windows Screen."

Capture Application Windows or the Entire Screen.

Use the Clipboard Viewer.

Print Application and Screen Captures.

Create and Delete Group Windows.

Create, Delete, Move, and Copy Program Items.

Use the Startup Group.

POINTS TO EMPHASIZE

Compare and Contrast

Capture an Application Window and **Capture an Entire Screen**:

- Capturing an application window copies a picture of the contents of *just* the *active application window* onto the clipboard.
- Capturing the entire screen copies a picture of the contents of the *entire screen* onto the clipboard. Windows must be using the *386 Enhanced mode* to perform a screen capture.

Create a Group Window and **Create a Program Item**:

- Creating a group window means to make a new group window (that can hold program items—just like other group windows do).
- Creating a program item means to name a program item (which represents a certain program) and tell Windows the name of the file that *executes* that program.

Select and **Deselect**:

- *Select* means to mark an item so that a subsequent action can activate it.
- *Deselect* means to unmark an item so that a future action will not activate it.

Save by Using "Save Settings on Exit" and **Save without Exiting Windows**:

- Saving the desktop arrangement by using the "Save Settings on Exit" method requires you to *select* the "Save Settings on Exit" option, and then to exit Windows. Further, if you do not *deselect* the command, Windows will continue to save your *desktop arrangement* every time you exit Windows.
- Saving the *desktop arrangement* without exiting Windows is a method whereby you use a single command to save the *desktop arrangement* (hold down **Shift** while you double-click on the Program Manager's control box) without exiting Windows.

Continued ...

Performing Screen and Window Captures

Different keyboards may use different keystrokes to perform *captures*.

To capture an application window, use:

Alt + Prnt Scrn

OR

Shift + Prnt Scrn

To capture the entire screen, use:

Prnt Scrn

OR

Alt + Prnt Scrn

OR

Shift + Prnt Scrn

Save Settings on Exit

The "Save Settings on Exit" menu item should remain **deselected**, that is, there should not be a ✓ by it. The reason for this is to avoid disturbing the "starting Windows screen," which is the starting point for exercises in this book.

Group Windows and Program Items

Windows uses **group windows** to organize **program items**. When Windows is installed, certain groups are automatically created (see page 148).

But, you can also *customize* **group windows** and the **program items** in the **group windows**. You can create and delete **group windows**; and you can create, move, copy, and delete the **program items** that are placed in the **group windows**.

Remember that **program items** represent the *commands that start* the programs that are named, and **program-item icons** represent the **program items** in the **group windows**.

Program items can represent *documents* as well as *commands to start programs*.

Startup Group

The **startup group window** is a special group window that is designed so that **program items** that appear in it automatically start when Windows is started.

WORKSHEET 21

BEYOND BASICS TERMS

NAME _____

DIRECTIONS: Match the terms listed below to the definition that best fits the term.

paste	text box	capture (noun)	Clipboard Viewer
select	clipboard	option buttons	startup group window
deselect	program items	group windows	capture (verb)

1. A temporary storage area used to hold information that is being transferred from one program (or document) to another. 1) _____

2. To *unmark* an item so that a future action will not activate the item. 2) _____

3. To *mark* an item so that a subsequent action can activate it. 3) _____

4. The *image* of an application window or the entire screen that has been copied onto the clipboard. 4) _____

5. To *perform the keystrokes to copy* the image that is visible on your monitor (either an application window or the entire screen) onto the clipboard. 5) _____

6. A special group window that has been designed so that *program items* that appear in it *start* when you start Windows. 6) _____

7. A program that lets you *see* the contents of the clipboard. 7) _____

8. Circles in a dialog box from which you may select only one of a *related* group. 8) _____

9. To *copy* information from the clipboard into a program. 9) _____

10. A box that provides space for typing information needed to carry out a command. 10) _____

11. What are the programs that make up a *group* in the Program Manager called? They are represented as icons in a group window. 11) _____

12. Windows within the Program Manager window which hold "groups" of *program items*. 12) _____

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WORKSHEET 22

BEYOND BASICS TASKS

NAME _____

DIRECTIONS: Match the tasks listed below to the definition that best fits the task.

create a group window	create a program item	capture an application window
delete a group window	delete a program item	save desktop arrangement
copy a program item	use the startup group	use the Clipboard Viewer
print a capture	move a program item	create "Starting Windows Screen"
capture the screen		

1. To copy an image of the *active application window* onto the clipboard. 1) _____

2. To remove a group window from the Program Manager window. 2) _____

3. To manipulate the Program Manager window, Main group window, and group window icons to approximate Windows' original opening screen. 3) _____

4. To save the arrangement of *Program Manager group windows and icons* so that Windows will remember that arrangement when you start Windows the next time. 4) _____

5. To "paste" the contents of the clipboard into a program and then print it. 5) _____

6. To *view*, *save*, *open*, or *delete* clipboard images. 6) _____

7. To copy an image of the *entire screen* onto the clipboard. 7) _____

8. To *name* a program item and tell Windows the name of the file that will *execute* (start) that program. 8) _____

9. To relocate a *program item* from one program group to another program group. 9) _____

10. To make a new group window. 10) _____

11. To duplicate a *program item* from one program group to another program group. 11) _____

12. To place a program (or programs) in a certain window so that when you start Windows, that program (or programs) will automatically *start*. 12) _____

13. To remove a *program item* from a program group. 13) _____

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WINDOWS Lesson Four
File Manager

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EXERCISE 38
Start File Manager

Exercises 38-41 should be done during the same session.

start File Manager
To use Windows to run the File Manager program.

File Manager window
The application window which holds the File Manager program and one or more directory windows (document windows).

Directory window
The window within the File Manager window that displays the files, directories, and subdirectories on your disk.

directory tree
The directory structure (root directory, directories, and subdirectories) displayed on the left side of the directory window.

contents of current directory
A list of the files and subdirectories located within the directory which is highlighted in the directory tree. These files and directories are displayed on the right side of the Directory window.

status bar
The bar at the bottom of the File Manager window that displays information about the current drive and directory.

Keyboard Users

START FILE MANAGER

With the Program Manger and Main windows both open, and the Main window *selected*:

1. **Press** arrow keys until File Manager's icon name is highlighted.
2. **Press** ↵

The File Manager is a program that oversees your files.

The Directory window (within the File Manager) displays the **disk structure** and the files within the disk structure.

Disk structure (or directory tree) refers to the way a disk is organized (which is similar to a filing cabinet):
- **root directory** (filing cabinet)
- **directories** (file drawers)
- **subdirectories** (subcategories within a file drawer)

There may be many, many files on a disk, and it is important—especially on a hard disk—to keep track of files by arranging them into related groups.

The root directory, directories, and subdirectories create the disk structure into which related groups of files are organized.

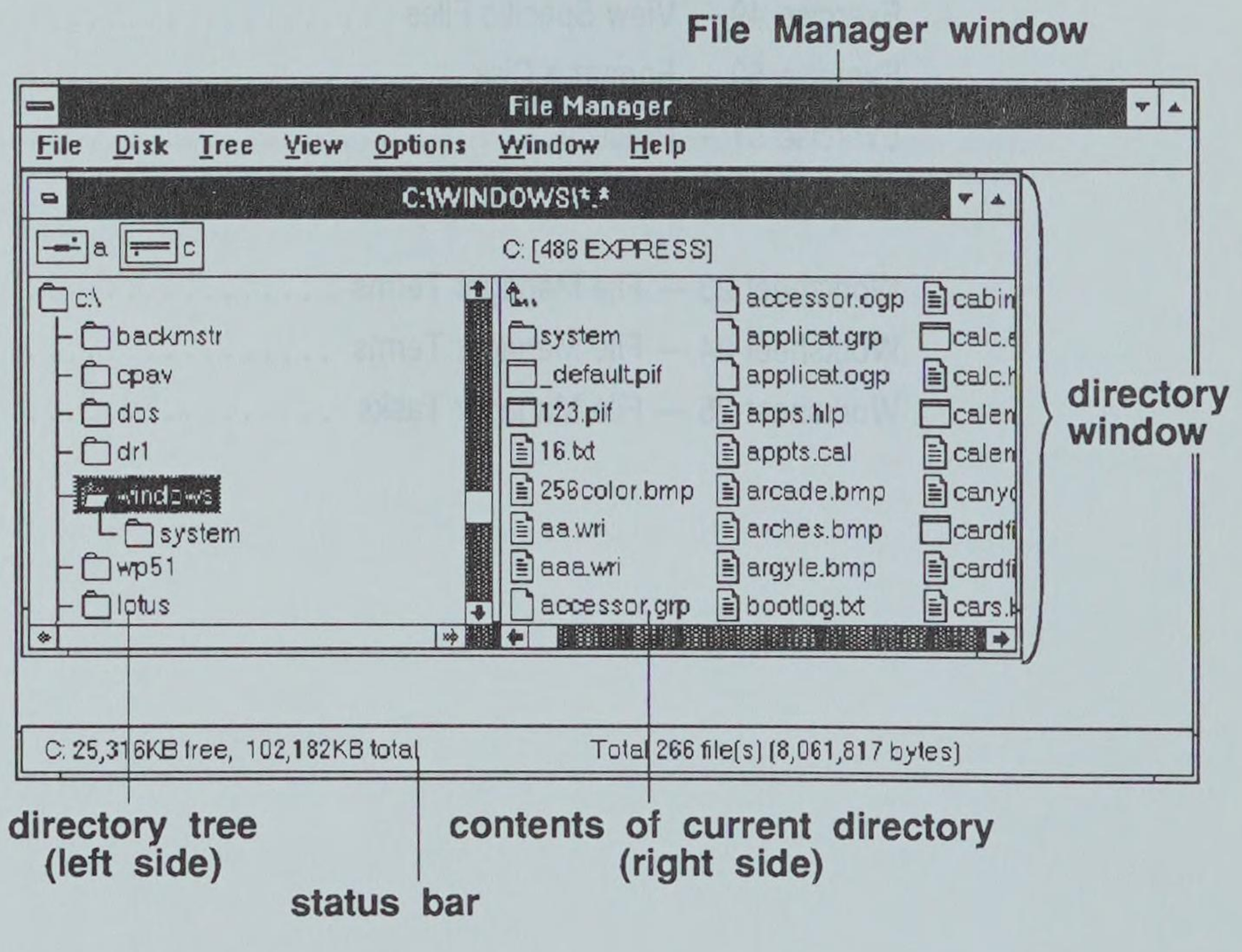
❶ **Start Windows.**

FROM THE *STARTING WINDOWS* SCREEN:
(With the Program Manager and the Main Group windows open.)

❷ **Double-click** on

.

The File Manager window, and the *current* Directory window within it, appears:

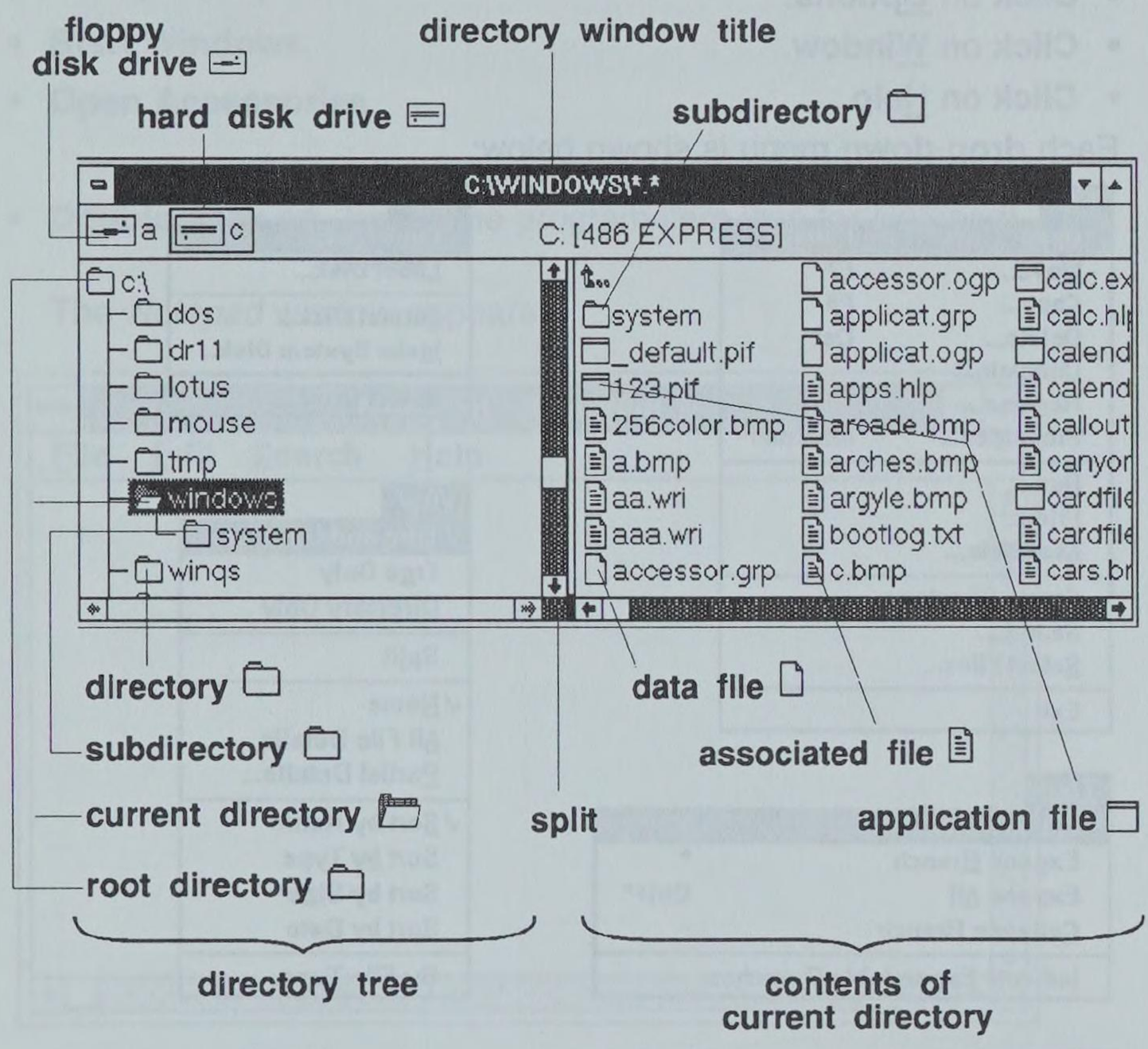


NOTE: Your directory window will display different directories and files.

Continue Exercise 38 on the next page

3 **Examine** the *Directory window*, *directory tree*, and *contents of current directory*.

Directory Window:



NOTE: The Directory window defaults to being split, displaying the directory tree on the left side and the contents of the current directory on the right side. This default can be changed to display only the directory tree (left side) or only the contents of the current directory (right side) in the window by accessing the ***View*** *menu and choosing* ***Tree Only***, ***Directory Only***. *Select* ***Tree and Directory*** *to return to a split screen.*

Go on to Exercise 39

EXERCISE 38 (continued)
START FILE MANAGER

Directory window title
The name of the current (highlighted) directory that is displayed in the title bar of the Directory window.

hard disk drive
The part of the computer system that transfers files back and forth between the computer and the hard disk (usually Drive C:).

floppy disk drive
The part of the computer system that transfers files back and forth between the computer and the floppy disks (usually Drive A: and possibly Drive B: also).

directory
The part of the disk structure that holds files and/or other directories (called subdirectories).

current directory
The active directory which is highlighted.

root directory
The original (or highest level) directory on a disk.

subdirectory
Directories that are within other directories.

file
A set of data that is saved on a disk as a named unit.

data file
A file that consists of data created in a program, such as a letter typed into a word processor.

application (program) file
A file that holds a set of instructions that perform a task, such as word processing.

associated file
A file that is identified as belonging to a certain application, such as a Write (.WRI) or a Paintbrush (.BMP) file.

EXERCISE 39
File Manager Menus

Continue from Exercise 38, doing Exercises 38-41 during the same session.

File Manager menus

The drop-down menus that are displayed on the menu bar, some of which are similar to other Windows menus (such as File and Help) and others that are specific to File Manager (such as Disk, Tree, and View).

Keyboard Users

VIEW FILE MANAGER MENUS

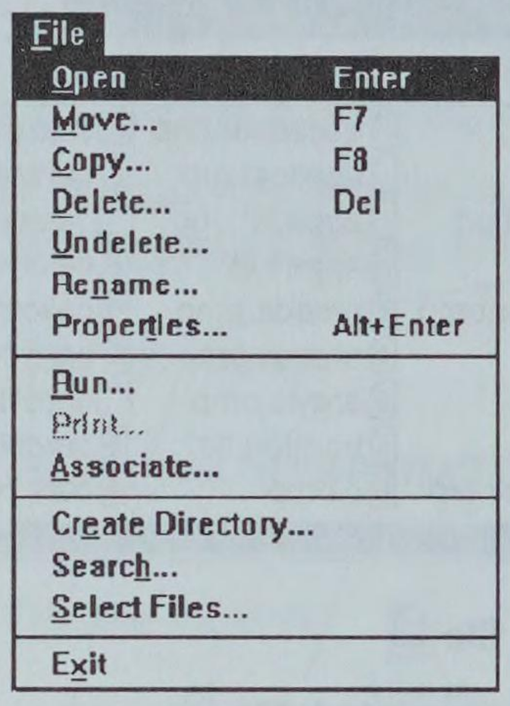
OPEN AND CLOSE MENUS:

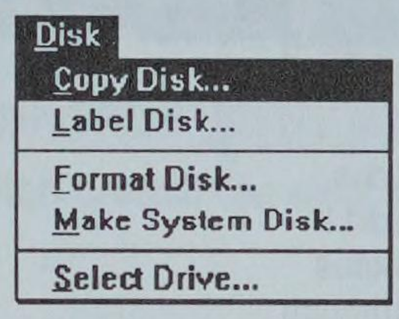
1. **Press** Alt + F (to open File)
2. **Press** Alt (to close File)
3. Repeat steps 1 and 2, replacing F with the underlined letter of each of the other menus in turn.
4. **Press** Alt to leave menus.

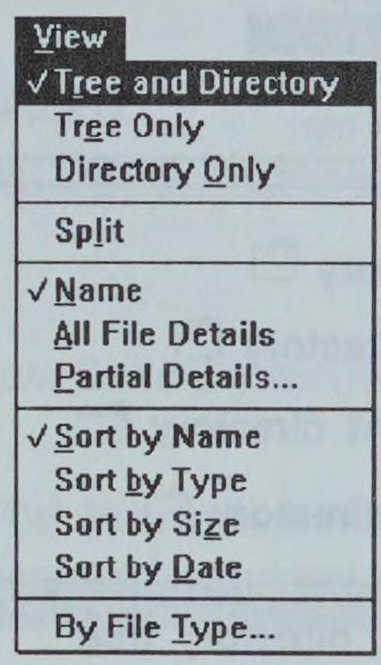
❶ LOOK AT EACH DROP-DOWN MENU:

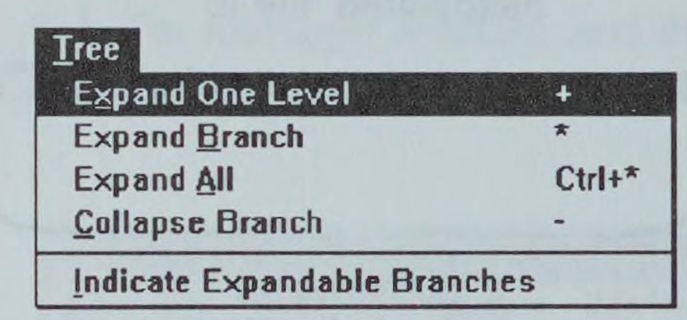
- **Click** on **File**.
- **Click** on **Disk**.
- **Click** on **Tree**.
- **Click** on **View**.
- **Click** on **Options**.
- **Click** on **Window**.
- **Click** on **Help**.

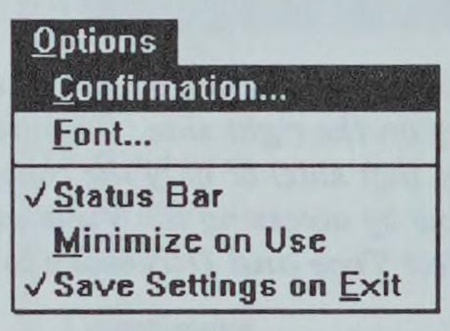
Each **drop-down** menu is shown below:

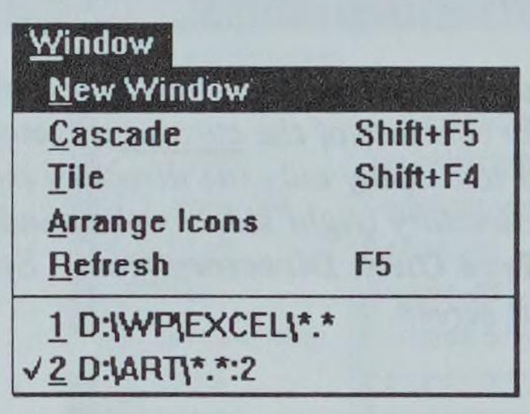


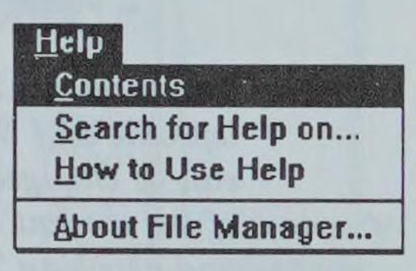












IMPORTANT!

❷ DESELECT "SAVE SETTINGS ON EXIT":

- **Click** on **Options**.
- IF ✓ does appear by "Save Settings on Exit," then:
  - Click on **Save Settings on Exit** (to deselect it).

  OR

  IF ✓ does not appear by "Save Settings on Exit," then:
  - **Click** anywhere off of the menu bar (to close the menu).
- **Click** on **Options**, again, to confirm that there is not a check mark by "Save Settings on Exit."
- **Click** anywhere off of the menu bar (to close the menu).

❸ **Exit File Manager**.

Go on to Exercise 40

EXERCISE 40
Prepare "Mock" Files for Lesson Four

IMPORTANT: You must prepare "mock" files for the File Manager Lesson in order to complete the exercises in the lesson. Use a blank, formatted disk of any size or density to save the "mock" files on. Notepad is a good program to use for this job since it saves files using less disk space than any other Windows Program. When through, you should have all the filenames that are listed on the next page saved on your floppy disk.

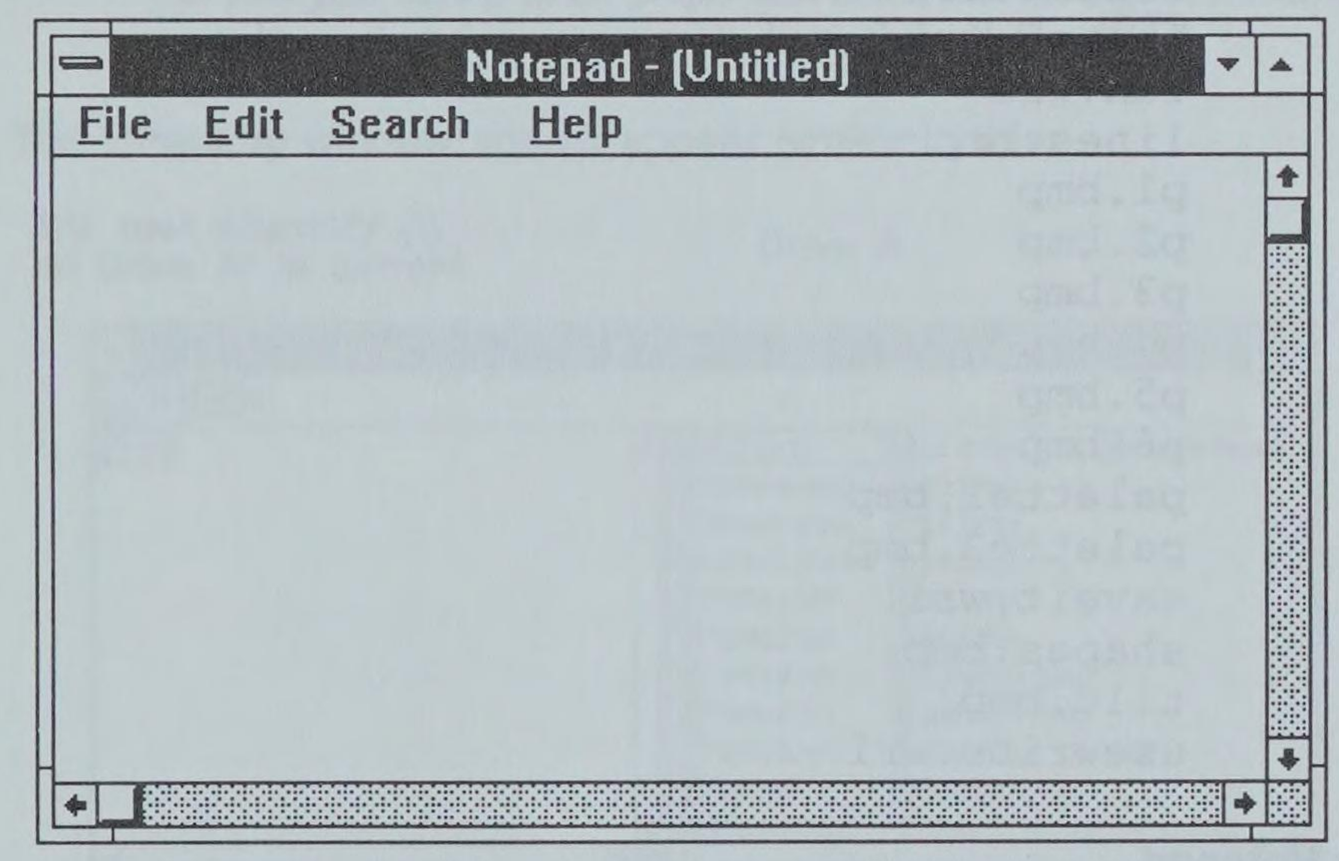
NOTE: If you continue using the data disk used in Lessons 4 and 5, the files should be deleted from it before you proceed.

1. • **Start Windows**.
   • **Open Accessories**.

2. • **Double-click** on

(the program-item icon for Notepad).

The *Notepad* window appears:



NOTE: The Notepad program is a "text editor" similar to, but not as complex as, Write. You can use Notepad to edit small "text files." "Text files" contain only letters, numbers and symbols, and are saved as ASCII files. They contain little or no formatting information, and they take up very little disk space.

3. Place a blank, formatted disk in Drive A: (or B:).

4. **Type** the first filename on the list of filenames on the next page:
   `cut.bmp`

5. SAVE THE "MOCK" FILE:
   • **Click** on **File**, then on **Save As...** .
   • **Click** on the **down arrow** for the **Drives** *drop-down list box*, then on *a:* (or *b:*).
   • **Click** on the **File Name** text box and **delete** the text in it.
   • **Type**: `cut.bmp`
   (Do not put any spaces in the filename.)
   *NOTE: Unless you direct Notepad to do otherwise, it saves and displays files with a .TXT extension. In this procedure you are directed to save files with .BMP and .WRI extensions. If you want to view your saved files during this process: **click** on the **List Files of Type** box, then on **All Files *.***.*
   • **Click** on [OK].

Continue Exercise 40 on the next page

A NOTE TO INSTRUCTORS:
To save time (especially if you are using this text in a classroom or for a workshop) you may want to prepare a "mock files" disk yourself, and then copy the disk for your students.

IMPORTANT: If, at any point in the following exercises, the files on your disk become "messed up," you can start with a blank disk again, create "mock" files again, and redo the exercises. There is nothing important that can be lost.

6. • **Click** on **File**, then on **New** (to clear the screen).
   • **Type** the next filename on the list below.
   • **Save** the file on Drive A: (or B:) using **Save As...**; use its filename and extension as the name.

7. Repeat step 6 above for each of the remaining filenames below.

```
cut.bmp
cutout.bmp
draw1.bmp
draw2.bmp
fonts1.wri
fonts2.wri
fonts3.wri
fonts4.wri
fonts5.wri
fun.wri
lines.bmp
p1.bmp
p2.bmp
p3.bmp
p4.bmp
p5.bmp
p6.bmp
palette1.bmp
palette2.bmp
saveit.wri
shapes.bmp
tilt.bmp
usewrite.wri
```

8. **Exit Notepad**.

9. **Go** on to Exercise 41.

   OR

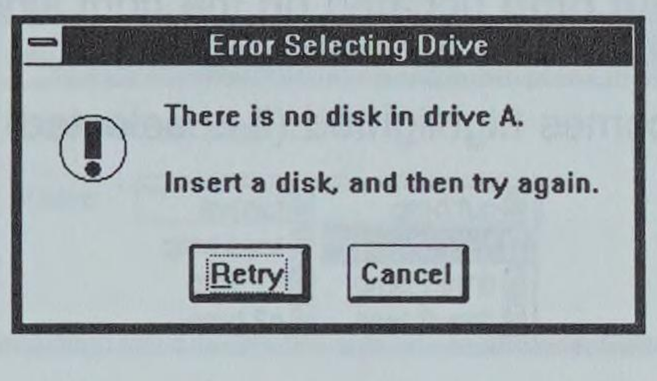
   Exit Windows.

1. **Start File Manager**, if necessary.

2. Place your floppy disk, which contains the "mock" files, in Drive A: (or B:).

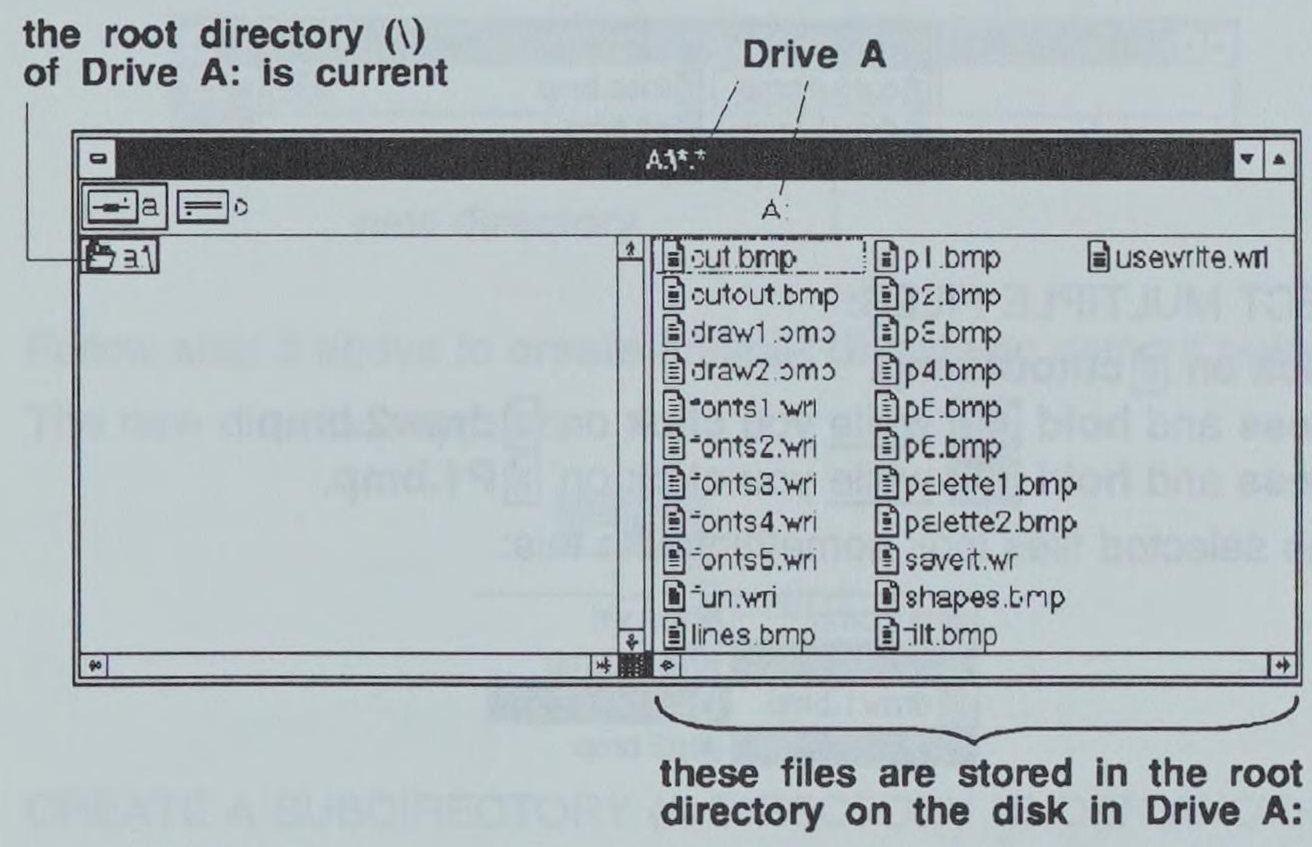
3. **Click** on a (or b) (the floppy disk drive icon).

   *NOTE: **IF** this message window appears:*



   *be sure your disk is in the proper disk drive, that the door is closed, and that you have selected the appropriate drive, then **click** on* Retry.

The Directory window should appear similar to this:



4. **Click** on (the hard disk drive icon).

5. **Change** back to the **floppy** disk drive.

6. **Change** back to the **hard** disk drive.

7. **Exit** the **File Manager**.

8. **Go** on to Exercise 42.

   OR

   Exit Windows.

EXERCISE 41
Change the Disk Drive

Continue from Exercise 39, doing Exercises 38-41 during the same session.

change the disk drive
To switch between the drives shown in the Directory window.

WARNING: Because of the possibility of destroying important files on the hard disk, this book instructs you to work with the files that have been stored on a floppy disk in Drive A: (or B:) to complete the exercises in the File Manager Lesson.

The following files should be on your floppy disk:

cut.bmp	p1.bmp
cutout.bmp	p2.bmp
draw1.bmp	p3.bmp
draw2.bmp	p4.bmp
fonts1.wri	p5.bmp
fonts2.wri	p6.bmp
fonts3.wri	palette1.bmp
fonts4.wri	palette2.bmp
fonts5.wri	saveit.wri
fun.wri	shapes.bmp
lines.bmp	tilt.bmp
	usewrite.wri

WARNING: **Click only once** on the drive icon to **change the disk drive** displayed in the current directory window (double-clicking will "open another directory window").

Keyboard Users

CHANGE THE DISK DRIVE

From the File Manager Window:

1. **Press** Tab until a disk drive icon is highlighted.
2. **Use** → or ← to select the desired disk drive.
3. **Press** Space

EXERCISE 42
Select and Deselect Files

Exercises 42-45 should be done during the same session.

select files
To highlight files. Once files are selected, commands can be carried out that affect them, such as moving, copying, or deleting the files.

deselect files
To remove the highlighting from files.

Keyboard Users

SELECT AND DESELECT FILES

1. **Press** Tab until the cursor moves to the list of files (right side) on the Directory window.
2. Perform an action:

SELECT A FILE:

- Use arrow keys to select the desired file.

SELECT MULTIPLE FILES:

a. Use arrow keys to highlight the first file to select.
b. **Press** Shift + F8
   (The cursor starts blinking.)
c. Use arrow keys to move to the next file to select.
d. **Press** Space
e. Repeat c and d until all files are selected.
f. **Press** Shift + F8

SELECT ADJOINING FILES:

- Use arrow keys to move the cursor to the first file to select.
- **Press** and **hold** Shift while you use arrow keys to select files.

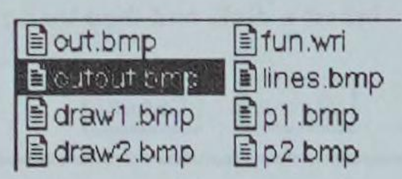
DESELECT MULTIPLE FILES:

- **Press** Space
  (One file will remain selected until you move to another area.)

1
- **Start Windows**, if necessary.
- **Start File Manager**.
- **Put** your floppy disk (used with this book) in Drive A: (or B:) and close the door, if necessary.
- **Change** to **Drive A:** (or B:).

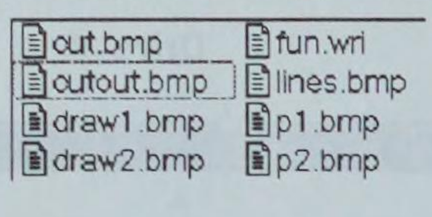
2 SELECT A FILE:
- **Click** on **cutout.bmp** (located on the right side of the Directory window).

  cutout.bmp becomes highlighted (it is selected):



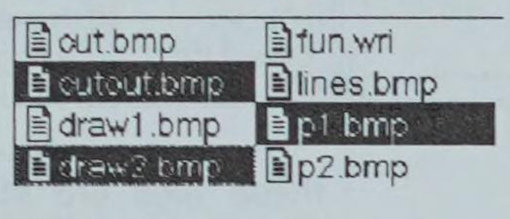
3 DESELECT A FILE:
- **Press** and **hold** Ctrl while you **click** on **cutout.bmp**.

  The **deselected** file looks something like this:



4 SELECT MULTIPLE FILES:
- **Click** on **cutout.bmp**.
- **Press** and **hold** Ctrl while you **click** on **draw2.bmp**.
- **Press** and **hold** Ctrl while you **click** on **P1.bmp**.

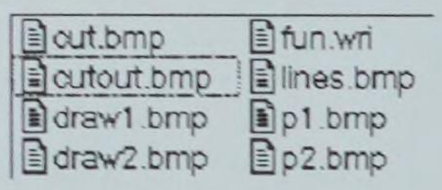
  The selected files look something like this:



5 DESELECT MULTIPLE FILES:
- **Click** on **cutout.bmp**. All the files except **cutout.bmp** are **deselected**.

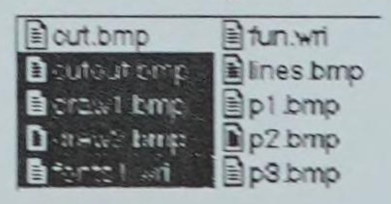
  NOTE: Clicking anywhere will deselect all the selected files, but the file you click on will stay (or become) selected.
- **Deselect** **cutout.bmp** (step 3).

  The **deselected** file looks something like this:



6 SELECT MULTIPLE ADJOINING FILES:
- **Click** on **cutout.bmp**.
- **Press** and **hold** Shift while you **click** on **fonts1.wri**.

  The selected files look something like this:



7 **Deselect** the files that are highlighted (step 5).

Go on to Exercise 43

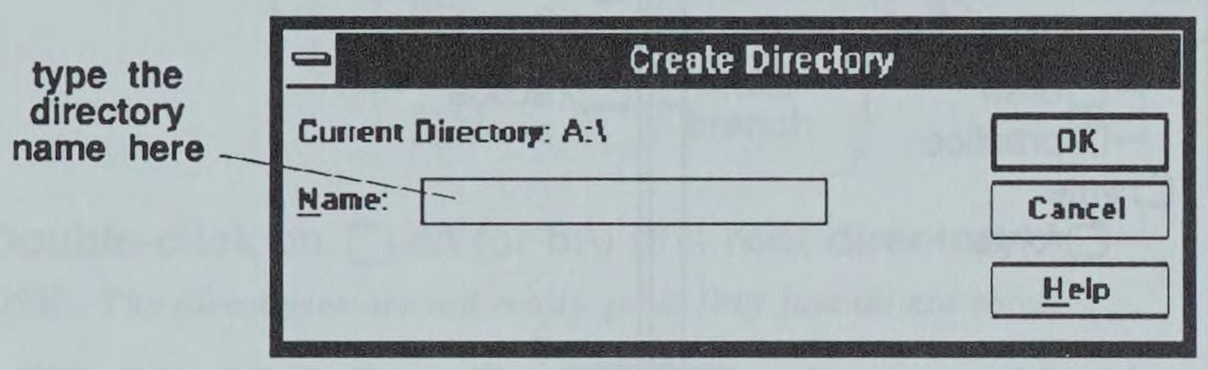
EXERCISE 43
Create a Directory

Continue from Exercise 42, doing Exercises 42-45 during the same session.

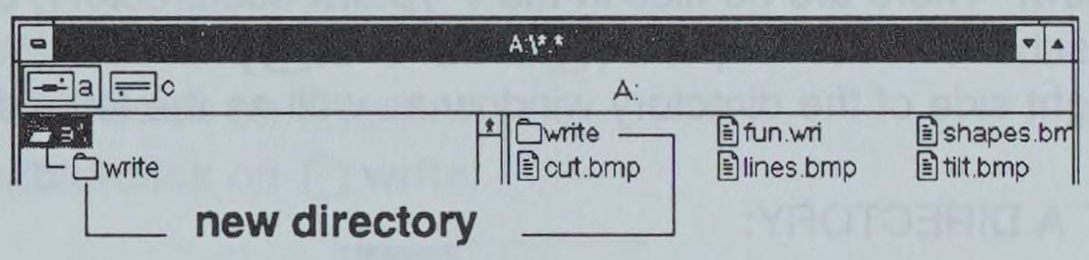
create a directory
To use commands in the File Manager to make a new directory.

1
- **Click** on **a:** (or **b:**) (the *root directory* located on the left side of the Directory window).

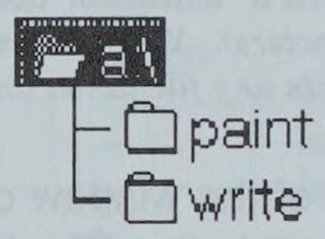
2 CREATE A DIRECTORY:
- **Click** on **File**.
- **Click** on **Create Directory...** .
  The *Create Directory* dialog box appears:



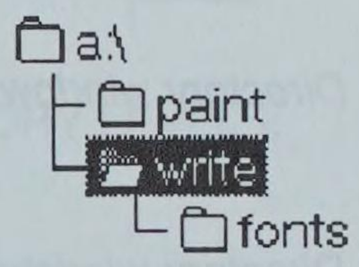
- **Type**: `write`
- **Click** on [OK].
  The new directory appears on both sides of Directory window:



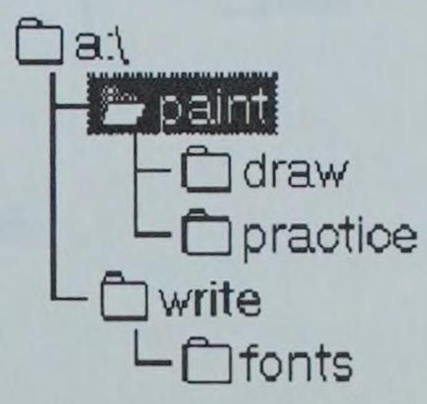
3 Follow step 2 above to **create** another **Directory**; name it **paint**.
The new directory appears:



4 CREATE A SUBDIRECTORY (A DIRECTORY UNDER ANOTHER DIRECTORY):
- **Click** on **write** (on the left side of the window).
- **Create** a Directory; name it **fonts**.
  The *fonts* subdirectory appears under the *write* directory:



5
- **Click** on **paint** (on the left side of the window).
- **Create** a Directory; name it **draw**.
- **Create** a Directory; name it **practice**.
  The two subdirectories appear under *paint*:



Go on to Exercise 44

NOTE: Subdirectories of the current directory are displayed at the top on the right side of the Directory window.

Keyboard Users

CREATE A DIRECTORY
From the File Manager Window:
1. **Press** Tab until the cursor is on the left side of the Directory window.
2. **Use** ↑ or ↓ to select the directory under which to create the new directory.
3. **Press** Alt + F (File)
4. **Press** E (Create Directory...)
5. **Type** a directory name.
6. **Press** ↵

EXERCISE 44
Select a Directory

Continue from Exercise 43, doing Exercises 42-45 during the same session.

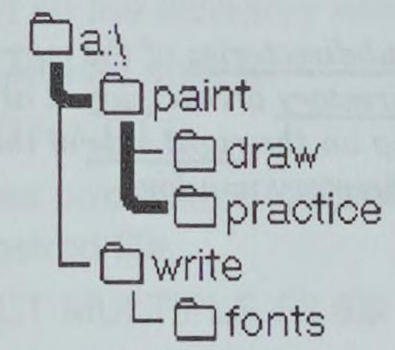
select a directory

To highlight a directory, making it current (and changing its icon from 🗀 to 🗁).

directory path

The path shows the location of a file within the directory tree. For example, the path to the PRACTICE directory shown in the illustration below is

A:\PAINT\PRACTICE



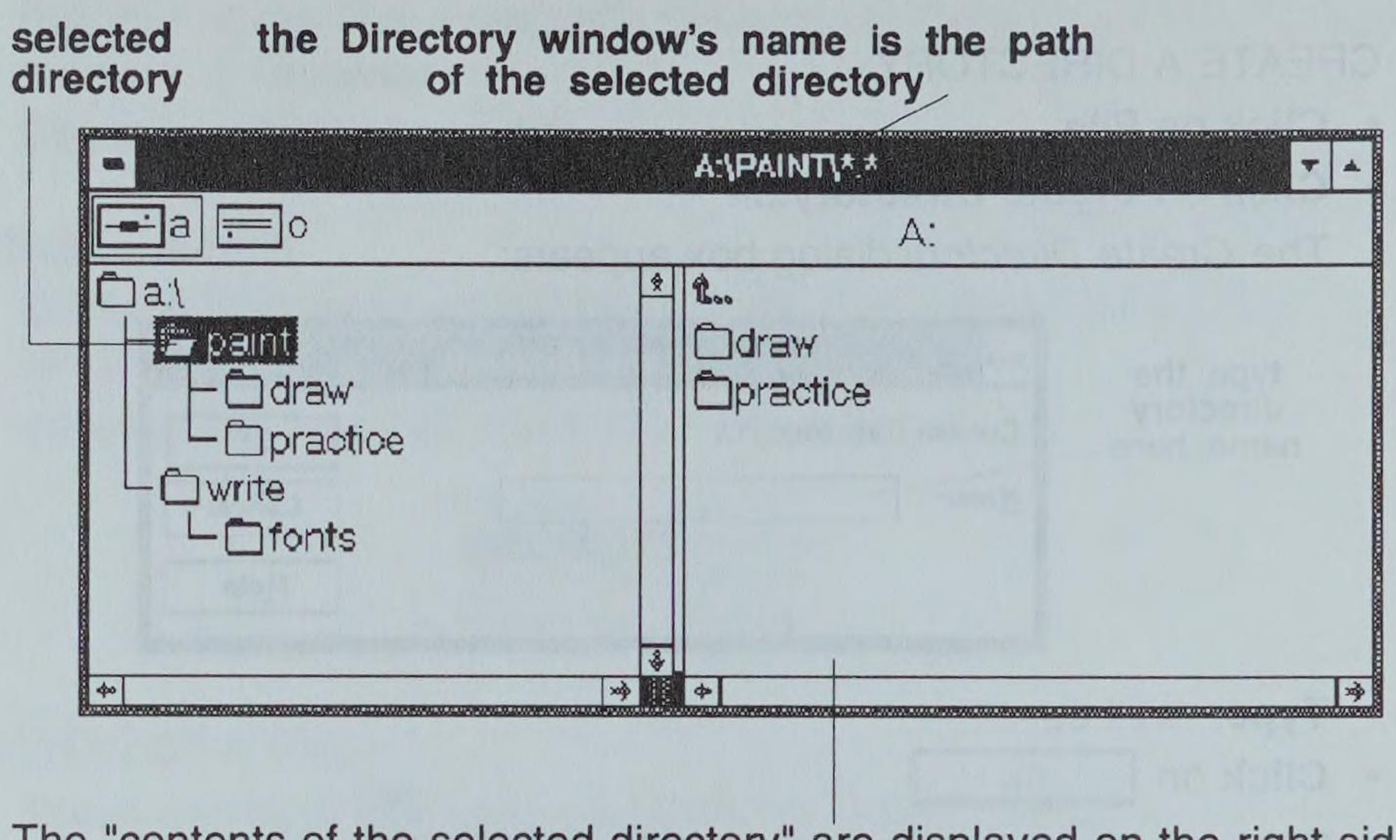
Each directory in the path is separated from other directories by a backslash (\). The root directory (A in this case) is always followed by a colon (:).

Keyboard Users

SELECT A DIRECTORY

1. **Press** Tab until the cursor moves to the "directory tree" (left side) of the Directory window.
2. **Press** ↑ and ↓ to highlight the desired directory.

Continue from Exercise 43 with the 🗁 **paint** subdirectory still highlighted. The Directory window looks similar to this:



The "contents of the selected directory" are displayed on the right side of the window. There are no files in the 🗁 **paint** subdirectory, but notice that the subdirectories for paint (🗀 **draw** and 🗀 **practice**) are displayed on the right side of the directory window as well as the left side.

1 SELECT A DIRECTORY:

- **Click** on 🗀 **a:** (or **b:**) (the root directory).
- Notice that the name in the *Directory window's* title bar changes to the name of the **selected** directory: A:*.* (or B:*.*).

  *NOTE: An asterisk (*) is called a "wildcard" because it represents one or more characters (any characters). When *.* is used, it means to list all files. The first asterisk represents any filename, and the second asterisk represents any file extension.*

- Notice that the right side of the window displays the two subdirectories and all the files that are within the 🗀 **a:** (or **b:**) directory.

2

- **Click** on 🗀 **practice**.
- Notice the **path** to the practice directory in the Directory window's name:

  A:\PAINT\PRACTICE*.* (or B:\PAINT\PRACTICE*.*)

3

- **Select** 🗀 **write**.
- Notice the name in the *Directory window's* title bar.

4

- **Select** 🗀 **fonts**.
- Notice the name in the *Directory window's* title bar.

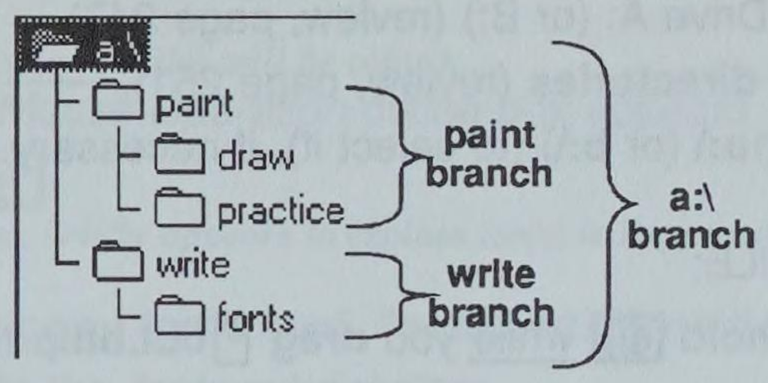
Go on to Exercise 45

1 COLLAPSE A BRANCH (ALL LEVELS OF DIRECTORIES WITHIN A DIRECTORY):

*NOTE: **Double-click** on the directory above the directories to be collapsed.*

With the directory tree fully expanded:

before collapse



- **Double-click** on **a:** (or **b:**) (the **root directory**).

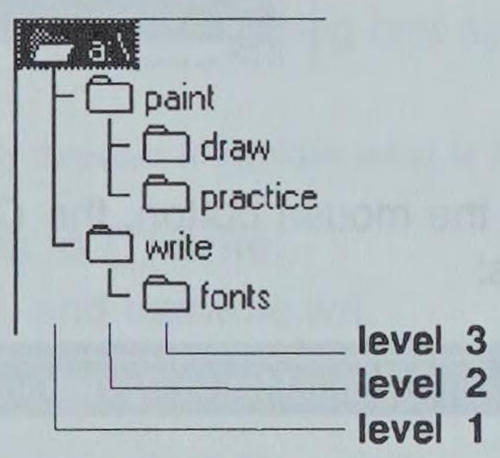
NOTE: The directories are not really gone; they just do not show.

after collapse

2 EXPAND DIRECTORIES ONE LEVEL AT A TIME:

*NOTE: **Double-click** on the **directory** to be expanded.*

- **Double-click** on **a:** (or **b:**).
- **Double-click** on **paint**.
- **Double-click** on **write**.



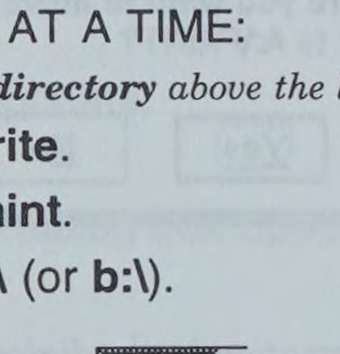
3 COLLAPSE ONE LEVEL AT A TIME:

*NOTE: **Double-click** on the **directory** above the level to be collapsed.*

- **Double-click** on **write**.
- **Double-click** on **paint**.
- **Double-click** on **a:** (or **b:**).

4 EXPAND ALL DIRECTORY LEVELS:

- **Click** on **Tree**.
- **Click** on **Expand All**.



5 **Exit File Manager**.

6 **Go** on to Exercise 46.

OR

Exit Windows.

EXERCISE 45
Expand and Collapse Directories

Continue from Exercise 44, doing Exercises 42-45 during the same session.

expand and collapse directories
To control the levels of directories shown in the directory tree.

expand directories
To display unseen directory levels in the directory tree.

collapse directories
To hide directory levels in the directory tree.

directory branch
All the levels of subdirectories within a specific directory.

directory levels
The tiers of subdirectory layers, starting with the root directory.

Keyboard Users

COLLAPSE AND EXPAND DIRECTORIES

1. **Select** the desired directory.
2. Perform an action below:

EXPAND ONE LEVEL
- **Press** Enter or +

EXPAND ONE BRANCH
- **Press** *

EXPAND ALL BRANCHES
- **Press** Ctrl + *

COLLAPSE DIRECTORIES
- **Press** -

EXERCISE 46 Move, Copy, and Delete Files

WARNING: It is a good idea to back up the files on your data disk before doing this exercise.

move and copy files

To transfer files from one directory to another directory. Copy leaves the original file intact, while move removes the original file.

delete files

To remove files from a disk.

shortcut keys to:

move: F7

copy: F8

Keyboard Users

MOVE, COPY, AND DELETE FILES

MOVE OR COPY FILES:

1. Select the file or files to be moved or copied.
2. **Press** Alt + F (File)
3. Move files:
   - **Press** M (Move)

   The *Move* dialog box appears:

   OR

   Copy files:
   - **Press** C (Copy)

   The *Copy* dialog box appears:
4. Type the pathname. (See **path** term on page 250.)
5. **Press** ↵

   The *Confirm File Replace* dialog box appears.
6. **Press** ↵

   Repeat step 6 for each file that is being moved or copied.

DELETE FILES:

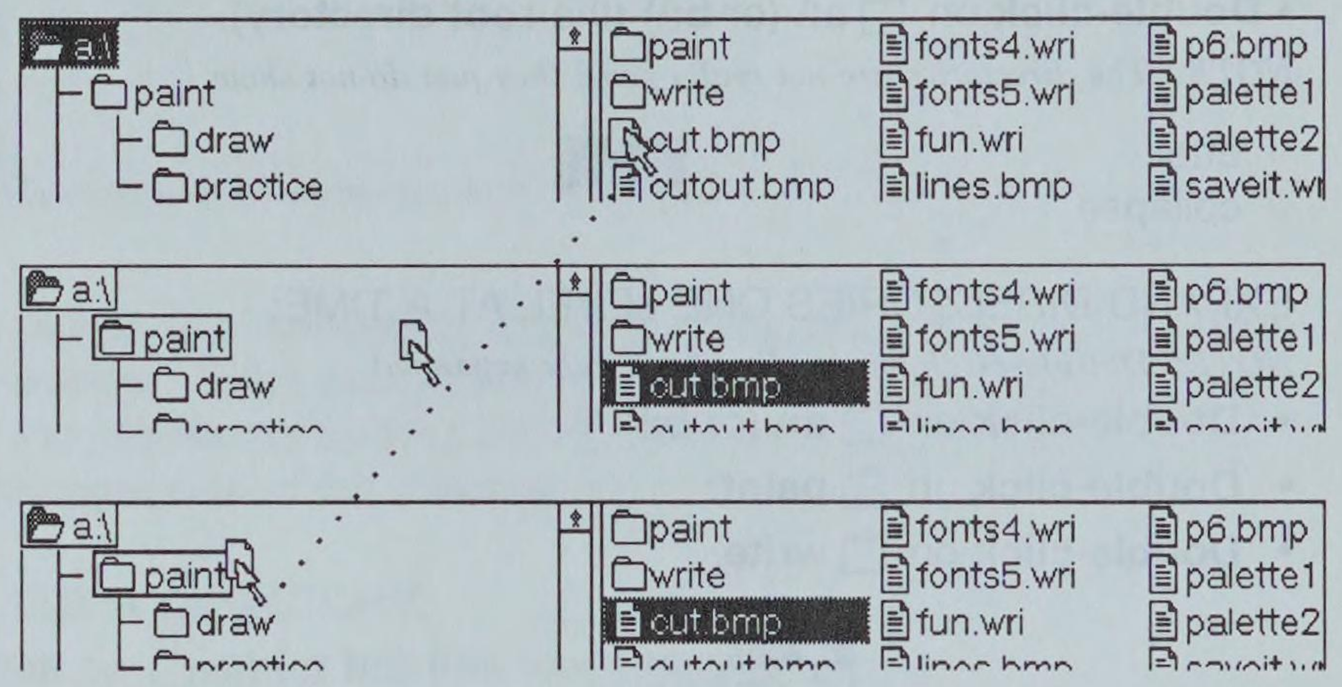
- Select the files to be deleted.
- **Press** Del
- **Press** ↵
- **Press** ↵

1

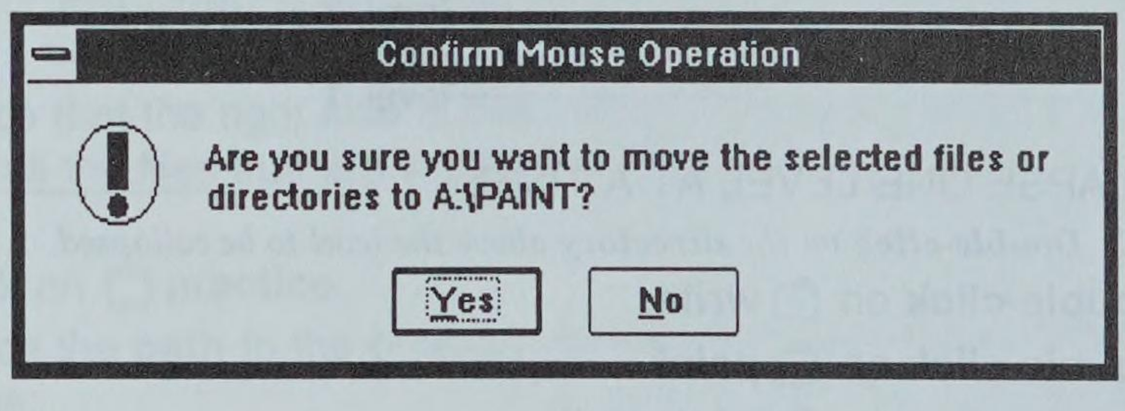
- **Start Windows**, if necessary.
- **Start File Manager**.
- **Put** your floppy data disk in Drive A: (or B:) and close the door, if necessary.
- **Change** to Drive A: (or B:) (review, page 247).
- **Expand all directories** (review, page 251).
- **Click** on a:\ (or **b:**) (to select it), if necessary.

2 COPY ONE FILE:

- **Press** and **hold** Ctrl while you **drag** **cut.bmp** to **paint**.



When you release the mouse button, the *Confirm Mouse Operation* dialog box appears:



NOTE: Always read the information in the dialog box to be sure that the desired action is going to take place.

- **Click** on Yes.

  A dialog box briefly appears to explain what is happening.

3 MOVE ONE FILE:

NOTE: Compare move files with copy files. When moving files, DO NOT hold Ctrl while you drag the files.

- **Drag** **cutout.bmp** to **paint**.

  The *Confirm Mouse Operation* dialog box appears.
- **Click** on Yes.
- **Click** on **paint** (to display the files stored in it).

  Look on the right side of the Directory window. The two files (cut.bmp and cutout.bmp) should be showing.
- **Click** on **a:** (or **b:**) (to return to the files listed in the root directory).

Continue Exercise 46 on the next page

Exercise 46 (continued)

4. COPY MULTIPLE FILES:
   - **Select** **draw1.bmp** and **draw2.bmp** (review, page 248).
   - **Press** and **hold** Ctrl while you **drag** one of the selected files to **draw**.
     NOTE: All the selected files will be copied.
     The *Confirm Mouse Operation* dialog box appears.
   - **Click** on Yes.

   NOTE: A dialog box briefly appears to explain what is happening.

5. Follow step 4 to **copy** **fonts1.wri**, **fonts2.wri**, **fonts3.wri**, **fonts4.wri**, and **fonts5.wri** to the *fonts* subdirectory.

6. **Copy** **p1.bmp**, **p2.bmp**, **p3.bmp**, **p4.bmp**, **p5.bmp**, and **p6.bmp** to the *practice* subdirectory.

7. MOVE MULTIPLE FILES:
   - **Select** the following files:
     lines.bmp shapes.bmp
     palette1.bmp tilt.bmp
     palette2.bmp
   - **Drag** one file of the *block of selected files* to **paint** (the rest will follow, with an icon like this).
     The *Confirm Mouse Operation* dialog box appears.
   - **Click** on Yes.

   NOTE: A dialog box briefly appears to explain what is happening.

8. **Move** the following files to **write**:
   fun.wri, saveit.wri, and usewrite.wri.

9. DELETE FILES:
   - **Click** on **cut.bmp** (to select it).
   - **Press** Del.
     The *Delete* dialog box appears.
   - **Click** on OK.
     The *Confirm File Delete* dialog box appears.
   - **Click** on Yes.

10. - **Select** the following files.
      draw1.bmp p1.bmp p3.bmp p5.bmp
      draw2.bmp p2.bmp p4.bmp p6.bmp
    - **Click** on **File**, then **Delete...**, then OK.
    - **Click** on Yes for each of the files to delete.

11. **Delete** the remaining *files* in **A:** (or **B:**). WARNING: DO NOT DELETE the subdirectories (**paint** and **write**).

12. **Select** each of the directories (paint, draw, practice, write, fonts, and then a:\ (or b:\)) and look at the files in each directory.

13. **Exit File Manager**.

14. **Go** on to Exercise 47.

    OR

    Exit Windows.

EXERCISE 46 (continued)

MOVE, COPY, AND DELETE FILES

WARNING:

If you try to move or copy files to a directory that already contains those files (which may happen, for example, if you try to repeat the steps in this exercise), a Confirm File Replace dialog box will appear. It tells you what action is about to happen and asks for confirmation for each file. This is designed to prevent you from replacing an important file accidentally.

OVERVIEW OF FILE MOVEMENT:

In this exercise, the following files are being moved or copied from **a:** (or **b:**) to:

paint	draw	practice
cut	draw1	p1
cutout	draw2	p2
lines		p3
palette1		p4
palette2		p5
shapes		p6
tilt		

write	fonts
fun	fonts1
saveit	fonts2
usewrite	fonts3
	fonts4
	fonts5

The files remaining in **a:** (or **b:**) are then deleted.

EXERCISE 47
View File Details

Exercises 47-49 should be done during the same session.

view file detail
To display additional information about files, beyond the file's name and extension. The following kinds of file information can be displayed:

- file size
- last modification date
- last modification time
- file attributes

NOTE:
A check box with an "X" (☒) in it is selected.
An empty check box (☐) is deselected.

Keyboard Users

VIEW FILE DETAILS

VIEW ALL FILE DETAILS:
1. **Press** Alt + V (View)
2. **Press** A (All File Details)

VIEW PARTIAL FILE DETAILS:
1. **Press** Alt + V (View)
2. **Press** P (Partial File Details...)
3. Select options as desired:
   - ☐ Size
   - ☐ Last Modification Date
   - ☐ Last Modification Time
   - ☐ File Attributes
4. **Press** ↵

VIEW ONLY FILENAME:
1. **Press** Alt + V (View)
2. **Press** N (Name)

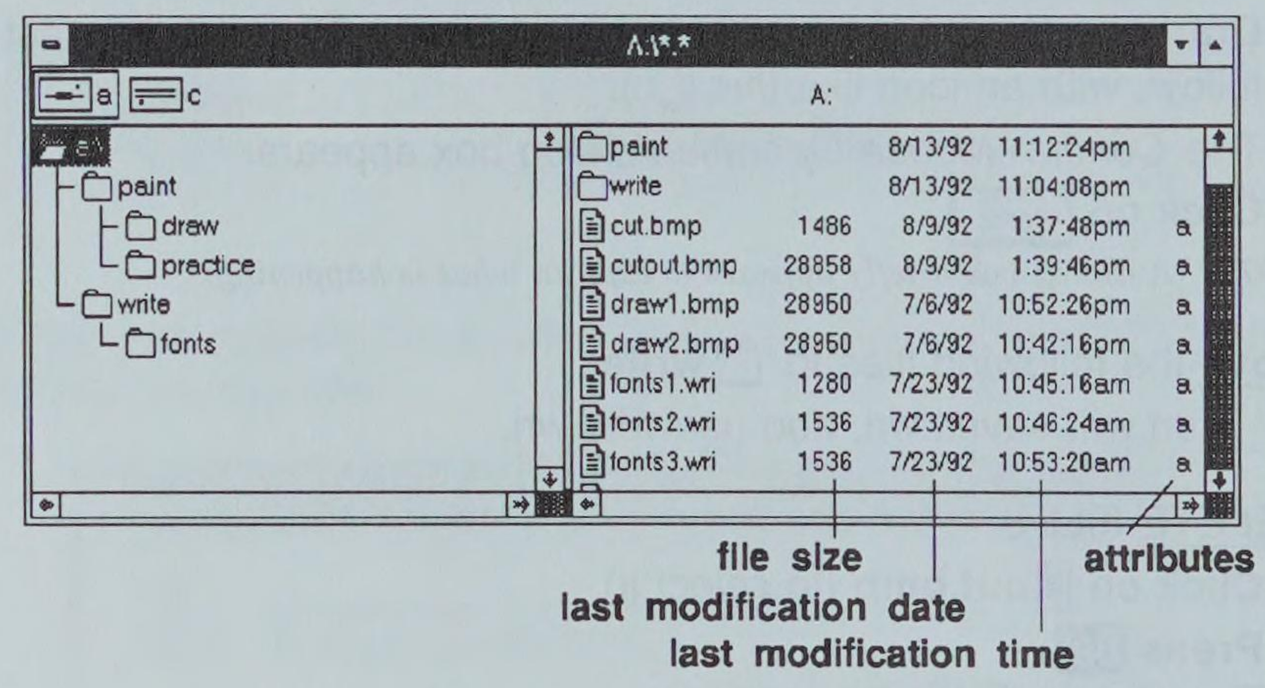
1
- **Start Windows**, if necessary.
- **Start File Manager**.
- **Put** your floppy data disk in Drive A: (or B:) and close the door, if necessary.
- **Change** to Drive A: (or B:) (review, page 247).
- **Expand all directories** (review, page 251).

2 COPY FILES BACK TO THE ROOT DIRECTORY:

a. **Select** 🗀 **paint**.
b. **Select** and then **copy** all the files to 🗁 **a:** (or **b:**) (review, page 253).
c. Using steps a and b above, **copy** all of the files *from* 🗀 **draw**, 🗀 **practice**, 🗀 **write**, and 🗀 **fonts** *to* 🗁 **a:** (or **b:**).
d. **Select** 🗁 **a:** (or **b:**).
There should now be 23 files and 2 subdirectories on the right side.

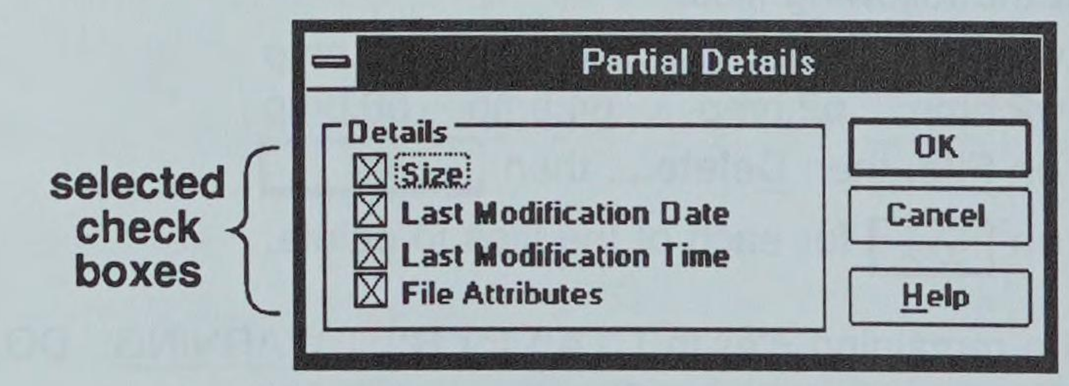
3 VIEW ALL FILE DETAILS:

- **Click** on **View**, then on **All File Details**.
The Directory window now displays "all file details."



4 VIEW PARTIAL FILE DETAILS:

- **Click** on **View**, then on **Partial Details...**
The *Partial Details* dialog box appears with all the check boxes *selected* (because the last option used was to view *All File Details*):



- **Click** on ☒ Last Modification Time (to deselect it).
- **Click** on ☒ File Attributes (to deselect it).
- **Click** on OK.
The *Last Modification Time* and *File Attributes* disappear.

5 VIEW ONLY FILENAME:

- **Click** on **View**, then on **Name**.
The files appear with just their name showing.

Go on to Exercise 48

EXERCISE 48
Sort Files

Continue from Exercise 47, doing Exercises 47-49 during the same session.

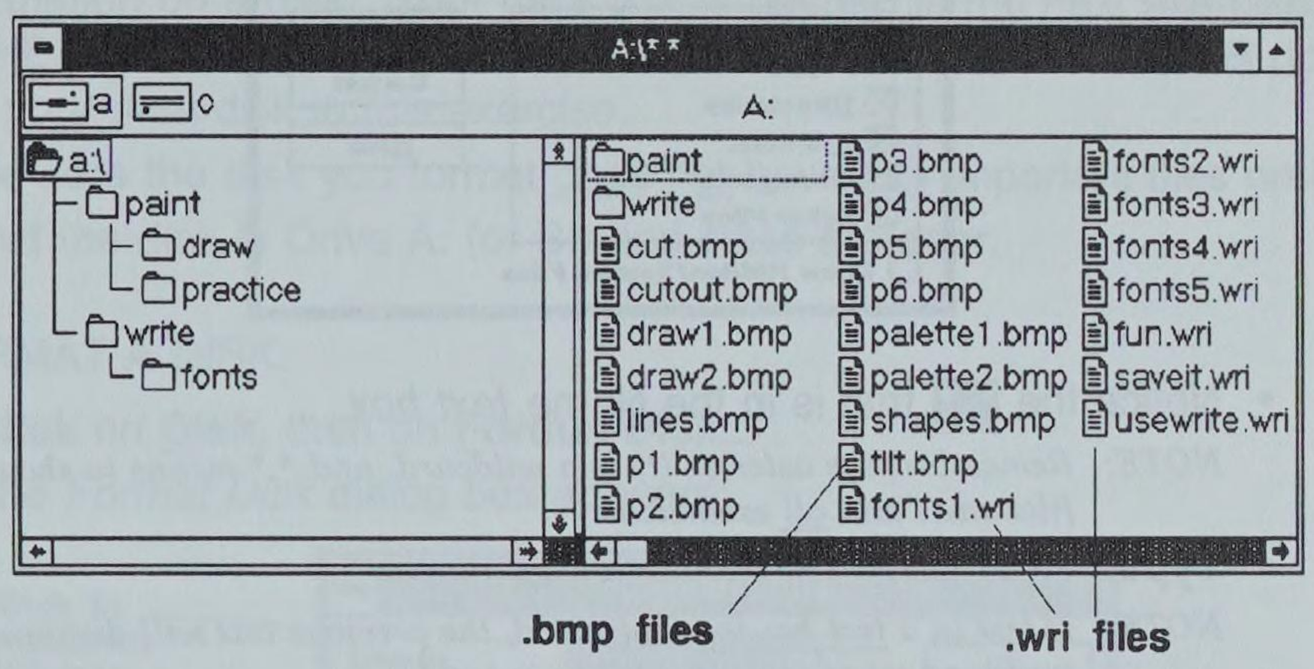
sort files
To arrange files in different orders, such as by alphabetic order, by size, by file type, or by last modification date.

file type
The extension on a filename (often called the file type) is often used to organize files into groups. For example, files ending with .wri belong with the Write program, files ending with .bmp belong with Paintbrush, and files ending with .exe are application files.

NOTE: When you sort by type, Windows sorts by the filename extension. When you view by File Type Windows shows only the files you specify.

1 SORT BY FILE TYPE:

- **Click** on **View**, then on **Sort by Type**.
  The files are displayed so that all the files with .BMP extensions are listed before the files with .WRI extensions: (They are also alphabetized *within* each file type.)



2 SORT BY SIZE:

- **Click** on **View**, then on **Partial Details...** .
- **Click** on ☐ **Size**, then on [OK].
- **Click** on **View**, then on **Sort by Size**.
  The files are listed with the largest file at the top, and the smallest file at the bottom.
- **Scroll** down through the files until you get to the smallest file.

3 SORT BY "LAST MODIFICATION DATE":

- **Click** on **View**, then on **Partial Details...** .
- **Click** on ☒ **Size** (to deselect it).
- **Click** on ☐ **Last Modification Date** (to select it).
- **Click** on ☐ **Last Modification Time** (to select it).
- **Click** on [OK].
- **Click** on **View**, then on **Sort by Date**.
  The files are listed with the most current file at the top, and the oldest file at the bottom. Since the files were probably created on the same date, they are all the same and cannot be sorted according to date. However, notice the times that are displayed for each file. The files are sorted by the *Last Modification Time*.
  *NOTE: If the right side of the Directory window is too narrow to display the entire date, **drag** the split bar to the left or enlarge the window.*
- **Scroll** down through the files until you get to the oldest file.

4 SORT BY NAME:

- **Click** on **View**, then on **Name**.
- **Click** on **View**, then on **Sort by Name**.
  The files are sorted in their original order, alphabetically.

Go on to Exercise 49

Keyboard Users

SORT FILES

SORT BY TYPE:
1. **Press** Alt + V (View)
2. **Press** T (Type)

SORT BY SIZE:
1. **Press** Alt + V (View)
2. **Press** Z (Size)

SORT BY DATE:
1. **Press** Alt + V (View)
2. **Press** D (Date)

SORT BY NAME:
1. **Press** Alt + V (View)
2. **Press** N (Name)

NOTE: See "View File Details" (previous page) for instructions on how to show the information you are sorting on.

EXERCISE 49

View Specific Files

Continue from Exercise 48, doing Exercises 47-49 during the same session.

view specific files

To display only certain specified files in the directory window—files whose conditions you control. For example, to show only files ending with the extension .BMP, or to show only files beginning with the letter "P." In addition to files with specific parameters, four different kinds of files can be selected using check boxes.

types of files

There are four different kinds of files that can be shown on the right side of the Directory window. The default is to display all four:

- directories
- programs (applications)
- or documents (data files)
- other files

Keyboard Users

VIEW SPECIFIC FILES

1. **Press** Alt + V (View)
2. **Press** T (By File Type...)
3. ENTER SPECIFIC CONDITIONS:

   Type conditions as desired, for example:

   *.bmp lists all files ending with .bmp.

   or

   p*.* lists all files beginning with "P."

   SELECT KIND OF FILE:

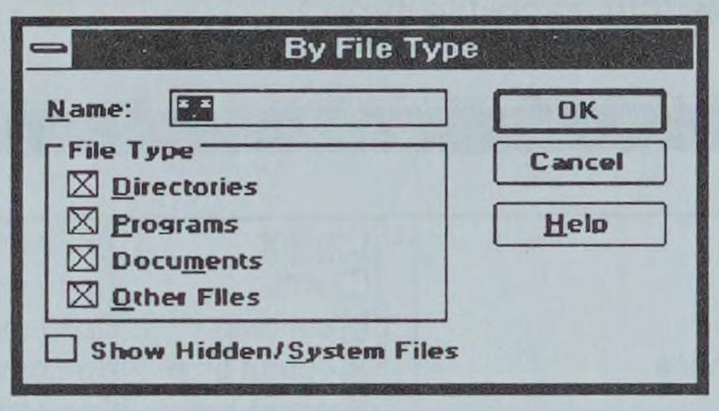
   - ☐ Directories
   - ☐ Program
   - ☐ Documents
   - ☐ Other Files

4. **Press** ↵

1 VIEW SELECTED FILES:

- **Click** on **View**.
- **Click** on **By File Type**.

  The *By File Type* dialog box appears:



- Notice the *.* that is in the Name *text box*.

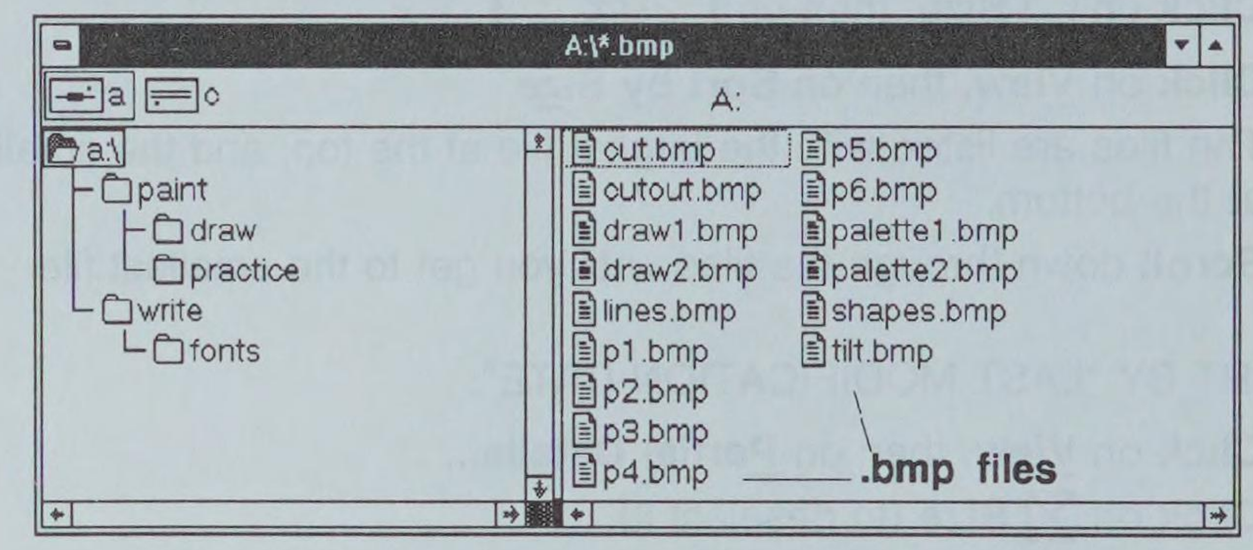
  *NOTE: Remember, the asterisk (*) is a wildcard, and *.* means to show all filenames and all extensions.*

- **Type:** *.bmp

  NOTE: If text in a text box is highlighted, the previous text will disappear when you type, and what you type will be entered.

- **Click** on OK.

  The right side of the Directory displays only files with .bmp extensions:



2

- **Capture** an application window (review, page 222).
- **Select** the Program Manager window (press Ctrl + Esc (Task List) and **double-click** on **Program Manager**).
- **Print** the **capture** (review, page 224).
- Use the Task List to **select** the **File Manager** window.

3 **View** only files that begin with "P" (step 1).

Hint: Type p*.* in the Name *text box*.

4 DISPLAY ALL FILES:

- **Click** on **View**, then on **By File Type**.

  The *By File Type* dialog box appears.

- **Type:** *.*
- **Click** on OK.

5 **Exit File Manager.**

6 **Go** on to Exercise 50.

OR

Exit Windows.

EXERCISE 50
Format a Disk

format a disk
To prepare a disk for holding information. Formatting erases any information that may be on a disk.

disk capacity
5 1/4" high density disks
hold 1.2 MB (megabytes)

5 1/4" double density disks
hold 360 K (kilobytes)

3 1/2" high density disks
hold 1.4 MB

3 1/2" double density disks
hold 720 K

NOTE: The Quick Format "Option," found in the "Format Disk" dialog box lets you format previously formatted disks quickly. Disks are not scanned for bad sectors if you use this option.

Keyboard Users

FORMAT A DISK

From the File Manager:

1. **Press** Alt + D (Disk)
2. **Press** F (Format Disk...)
   The *Format Disk* dialog box appears.
3. If the disk drive displayed in the *Disk In* box is not correct:
   - **Press** Tab until the *Disk In* box is selected.
   - **Press** ↓ (to open it)
   - **Select** correct drive.
4. If the disk formatting capacity displayed in the *Capacity* box is not correct:
   - **Press** Tab until the *Capacity* box is selected.
   - **Press** ↓ (to open it)
   - **Select** correct capacity.
5. **Press** ↵ (the Confirm Format Disk window appears)
6. **Press** ↵ (the Format Complete window appears)
7. **Press** ↵

1 • **Start Windows**, if necessary.
• **Start File Manager**.

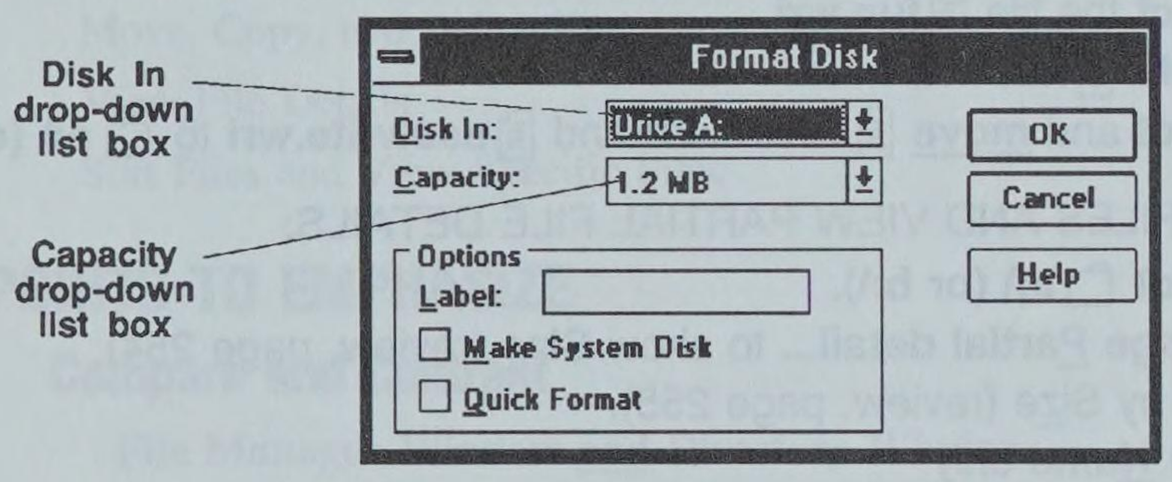
2 CHOOSE A DISK TO FORMAT:

IMPORTANT! Formatting a disk is risky because it erases all the information on a disk. Your data disk is needed in the next exercise, so EITHER do Exercise 51 and then come back to this exercise, OR do not use your data disk in this exercise.

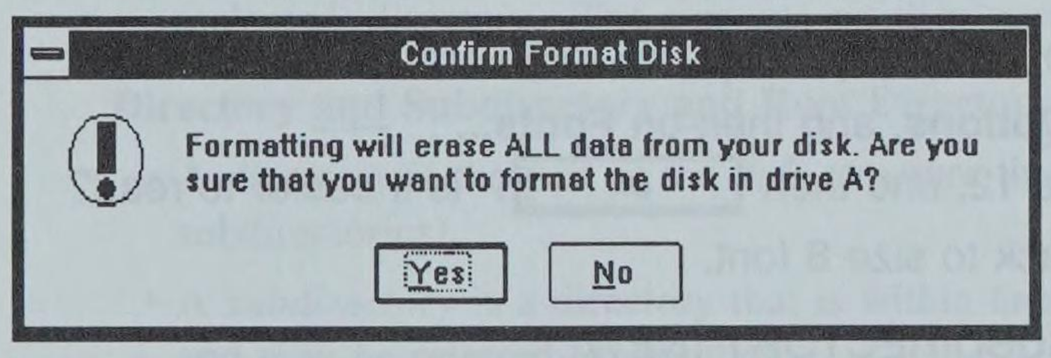
- Be sure the disk you format does not have any important files on it.
- **Put** the disk in Drive A: (or B:) and close the door.

3 FORMAT A DISK:

- **Click** on **Disk**, then on **Format Disk...** .
  The *Format Disk* dialog box appears:



- Look at the Disk In drop-down list box.
  IF the disk drive you want to use is not displayed, **click** on the arrow and **select** the correct disk drive.
- Look at the Capacity drop-down list box.
  IF the disk formatting capacity you want to use is not displayed, **click** on the arrow and **select** the correct disk formatting capacity.
- **Click** on [OK].
  The *Confirm Format Disk* dialog box appears:



- **Click** on [Yes].
  The *Formatting Disk* message window keeps you informed.
  After a while, the *Format Complete* dialog box appears.
- **Click** on [No].
  The format is complete.

4 • **Click** on [-] **a:** (or **b:**). The Directory window shows that there are "no files found."

5 **Exit File Manager**.

6 **Go** on to Exercise 51.

OR

Exit Windows.

EXERCISE 51 Practice

Lesson Four
File Manager

Tasks Reviewed:

Start File Manager
Change the Disk Drive
View File Manager Menus
Expand and Collapse Directories
Create a Directory
Select a Directory
Select and Deselect Files
Move, Copy, and Delete Files
View File Details
Sort Files
View Specific Files

1
- **Start Windows**, if necessary.
- **Start File Manager**.
- **Put** your floppy data disk in Drive A: (or B:) and close the door, if necessary.
- **Change** to Drive A: (or B:) (review, page 247).
- **Expand all directories** (review, page 251).

2 CREATE A DIRECTORY; MOVE, COPY, AND DELETE FILES:
- **Create** a **directory** under **write**; name it **letters** (review, page 249).
- **Select** **a:\ (or b:\)**.
- **Select** the files **saveit.wri** and **usewrite.wri** (review, page 250).
- **Move** the selected files to **letters**.
- **Select** **fun.wri** and **copy** it to **letters**.
- **Select** **letters**. Are the three files in it?
- **Select** the file **fun.wri**.
- **Delete** **fun.wri**.
- **Select** and **move** **saveit.wri** and **usewrite.wri** to **a:\ (or b:\)**.

3 SORT FILES AND VIEW PARTIAL FILE DETAILS:
- **Select** **a:\ (or b:\)**.
- **Change Partial detail...** to show **Size** (review, page 254).
- **Sort** by Size (review, page 255).
- **View Name** only.
- **Sort** by Name.

4 VIEW SPECIFIC FILES:
- **View** the specific files that start with "F" and have the .WRI extension. Hint: enter f*.wri in the Name *text box* (review, page 256).
- **View** all files. Hint: use *.* in the Name *text box*.

5 COLLAPSE AND EXPAND DIRECTORIES (review, page 251):
- **Collapse** the directories so that only **a:** (or **b:**) is showing.
- **Expand all directories**.

6 CHANGE FONT SIZE (NEW):
- **Click** on **Options**, and then on **Fonts...** .
- **Select** size 12, and then [OK]. Is it easier to read?
- Change back to size 8 font.

7 DELETE A SUBDIRECTORY (NEW):
- **Select** **letters** and then **Press** [Del].
  The *Delete* dialog box appears.
- **Click** on [OK].
  The *Confirm Directory Delete* dialog box appears.
- **Click** on [Yes].

8 DELETE FILES AND SUBDIRECTORIES:
- **Select** **fonts** (on the left side).
- **Delete** all the files in **fonts** (on the right side).
- **Delete** **fonts**.
- Select each of the remaining subdirectories (NOT **a:** (or **b:**)), delete all the files in each subdirectory, and then delete the subdirectory itself. The **a:** (or **b:**) directory and 23 files in it should be all that is remaining on the floppy disk.

9 **Exit File Manager** and **Windows**.

Lesson Four
Review of File Manager Exercises

Lesson Four (File Manager) covers tasks that:

Start File Manager and View the Menus

Change the Disk Drive

Select and Deselect Files

Create a Directory and Select a Directory

Expand and Collapse Directories

Move, Copy, and Delete Files

View File Details

Sort Files and View Specific Files

POINTS TO EMPHASIZE

Compare and Contrast

File Manager Window and Directory Window:

- The *File Manager* window is an *application window*. It holds the File Manager program and contains one or more Directory windows.
- The *Directory window* is a *document window* that is within the File Manager window and that displays files and directories on the active disk drive.

Directory Tree and Contents of Current Directory:

- The *directory tree* is a representation of the directory structure on your disk. It is displayed on the left side of the Directory window.
- The *contents of current directory* is a list of the subdirectories and files that are in the current (selected) directory. The contents are displayed on the right side of the Directory window.

Directory and Subdirectory and Root Directory and Current Directory:

- A *directory* is the part of the disk structure that holds files and other directories (also called subdirectories).
- A *subdirectory* is a directory that is within another directory. It is *both* a *directory* and a *subdirectory* and may be referred to as either.
- The *root directory* is the original (or highest level) directory.
- The *current directory* is the active (or selected) directory.

File and Data File and Program (Application) File and Associated File:

- A *file* is a "set of data" that is saved on a disk as a named unit.
- A *data file* contains data that was created in a program, such as a letter.
- A *program file* holds instructions that do a task, such as word processing. A program file usually has a filename extension of .EXE, .COM, .PIF, .BAT or .PIF.
- An *associated file* is a data file that belongs to a certain program, such as Write.

Continued ...

File Manager

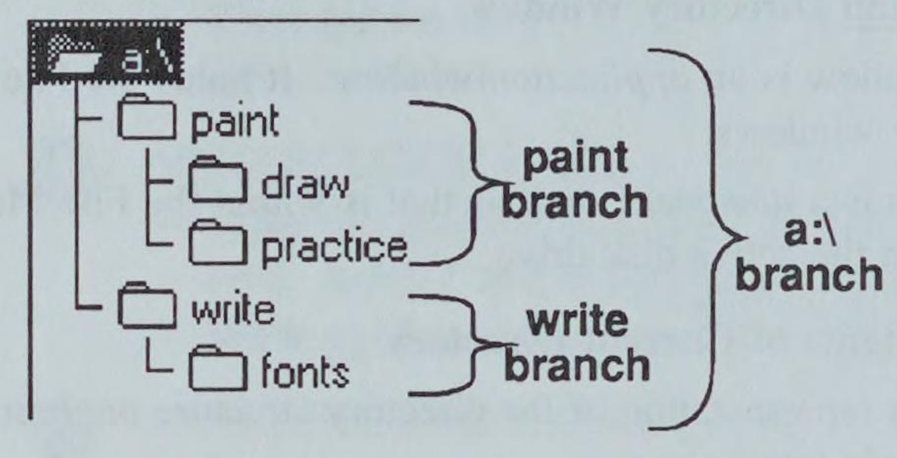
Managing files is a serious job. The disk you store files on is your *filing cabinet.* It is important to create a system in which you can quickly locate files when necessary.

The File Manager program makes it easy to work with your files by letting you:

- view your files
- organize your files into directories and subdirectories
- create new directories
- move, copy, and delete files
- sort your files in different ways
- select out specific groups of files
- search for files
- format disks
- start applications or look at a document file (as easy as **double-clicking** on the file)

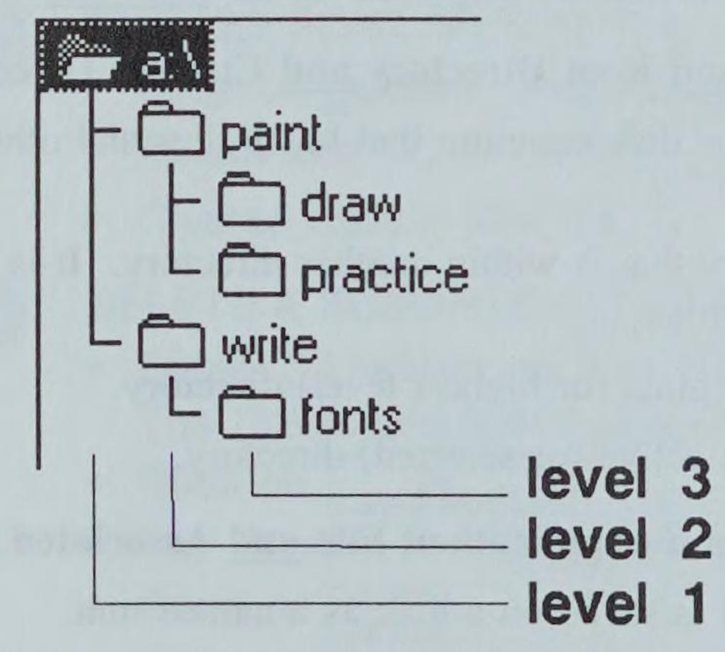
Directory Branch

A branch is all the levels of subdirectories within a particular directory.



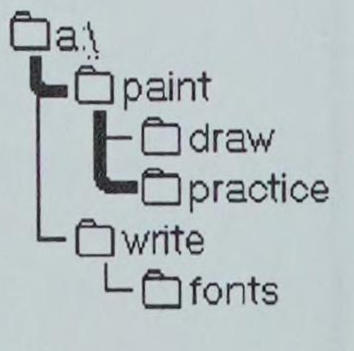
Directory Levels

Levels are the tiers of directory layers, starting with the root directory.



Directory Path

The **path** shows the location of files within the **directory tree**. Each directory in the **path** is separated from other directories by a backslash (\). The root directory (A in this case) is always followed by a colon (:).



The path to the PRACTICE directory is

A:\PAINT\PRACTICE

Continued ...

Points to Emphasize (continued)

View File Details

To show certain information about a file, such as its size, the date and time of the last modification, and its attributes (read only, active, hidden, and system).

Sort Files

Files can be sorted four ways:

alphabetically by NAME
alphabetically by FILE TYPE (file type refers to the filename extension here)
numerically by FILE SIZE
chronologically by LAST MODIFICATION DATE

Wildcard

A *wildcard* is a symbol that represents other characters.

? can represent any single character.

* can represent any single character or group of characters.

Wildcards are used to help you select specific *groups of files*.

For example:

*.EXE is used to select the *group of files* that have .EXE file extensions.

M*.* is used to select the *group of files* that start with the letter "M."

. is used to select all the files in a directory. The first * represents any filename, and the second * represents any filename extension.

View Specific Files and File Types

1. To indicate certain guidelines that affect which *group of files* is selected to be viewed by using wildcards in specifying file restrictions.
2. To indicate whether the *contents* (right) side of the Directory window will display

   directories,

   program files (files ending with .EXE, .COM, .PIF, and .BAT),

   document files, or

   other files (any file that does not fall under one of the categories above).

WORKSHEET 23

FILE MANAGER TERMS

NAME _____

DIRECTIONS: Use the following terms to fill in the blanks below:

status bar	File Manager window	floppy disk drive
directory tree	Directory window title	current directory
directory	hard disk drive	contents of current directory
Directory window		

1. What is the part of the disk structure that holds files and/or other directories (called subdirectories)? 1) _____

2. What is the bar at the bottom of the File Manager window that displays information about the current drive and directory? 2) _____

3. What is the active directory, the one that is highlighted? 3) _____

4. What window within the File Manager window displays the files, directories, and subdirectories on your disk? 4) _____

5. What is the part of the computer system that transfers files back and forth between the computer and the hard disk? 5) _____

6. What do you call the list of the files and subdirectories that are located within the directory highlighted in the directory tree and that is displayed on the right side of the Directory window? 6) _____

7. What is the name of the current directory that is displayed in the title bar? 7) _____

8. What application window holds the File Manager program and one or more directory windows (document windows)? 8) _____

9. What is the part of the computer system that transfers files back and forth between the computer and the floppy disk? 9) _____

10. What do you call the directory structure (root directory, directories, and subdirectories) displayed on the left side of the directory window? 10) _____

(This page may be copied.)

WORKSHEET 24

FILE MANAGER TERMS

NAME _____

DIRECTIONS: Use the following terms to fill in the blanks below:

directory path	file type	root directory
file	data file	collapse directories
directory branch	expand directories	associated file
directory levels	subdirectories	application (program) file

1. To display unseen directory levels in the directory tree. 1) _____

2. What are directories that are within other directories? 2) _____

3. What do you call the tiers of subdirectory layers, starting with the root directory? 3) _____

4. What is a set of data that is saved on a disk as a named unit? 4) _____

5. To hide directory levels in the directory tree. 5) _____

6. What is a file that is identified as belonging to a certain application, such as a Write or Paintbrush file? 6) _____

7. What is a file that consists of data that is created in a program, such as a letter typed into a word processor? 7) _____

8. What is the original (or highest level) directory on a disk? 8) _____

9. What is a file that holds a set of instructions that perform a task, such as word processing? 9) _____

10. What shows the location of a file within the directory tree? 10) _____

11. What do you call a filename extension, which is often used to organize files into groups? 11) _____

12. What is the term for all the levels of subdirectories within a specific directory? 12) _____

(This page may be copied.)

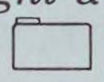
WORKSHEET 25

FILE MANAGER TASKS

NAME _____

DIRECTIONS: Use the following tasks to fill in the blanks below:

copy files	select a directory	delete files	change the disk drive
move files	start File Manager	deselect files	view File Manager menus
sort files	create a directory	view file details	expand and collapse directories
select files	view specific files	format a disk	

1. To *highlight* a directory, making it *current* (changing its icon from  to). 1) _____

2. To *highlight* files so that commands can be carried out that affect them, such as *moving*, *copying*, or *deleting* the files. 2) _____

3. To transfer files from one directory to another directory, but *leaving the original file intact*. 3) _____

4. To remove the highlighting from files. 4) _____

5. To use commands in the File Manager to make a new directory. 5) _____

6. To use Windows to run the File Manager program. 6) _____

7. To arrange files in different orders, such as by alphabetical order, by size, by file type, or by last modification date. 7) _____

8. To control the levels of directories shown in the directory tree. 8) _____

9. To transfer files from one directory to another directory and *removing the original file*. 9) _____

10. To remove files from a disk. 10) _____

11. To look at the drop-down menus that are displayed on the menu bar. 11) _____

12. To display only the certain files in the directory window—files whose conditions you control. 12) _____

13. To display additional information about the files, beyond the file's name and extension. 13) _____

14. To switch between the drives shown in the Directory window. 14) _____

15. To prepare a disk for holding information. 15) _____

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WINDOWS Lesson Five
Other Features

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EXERCISE 52
Start Write

Exercises 52-57 should be done during the same session.

start Write
To use Windows to run the Write Program.

Write
Write is Windows' word processor. Write uses many of the same features as Windows, such as a similar menu bar, dialog boxes, file commands, and window control elements.

insertion point
The insertion point is a blinking vertical line that shows where text will appear when you type.

end mark
The end mark is a small design (⌘) that identifies the end of a document.

I-beam pointer
The mouse-pointer shape in Write's work area. Click the I-beam in the desired location to move the insertion point to that spot. (The insertion point cannot be placed beyond the end mark.)

page-status area
The page-status area tells you what page is showing on the screen, but until you repaginate (a File menu command), it displays only "Page 1."

Keyboard Users

START WRITE

1. **Press** Ctrl + Tab until the Accessories icon name is highlighted.
2. **Press** ↵
3. **Press** arrow keys until Write's icon name is highlighted.
4. **Press** ↵

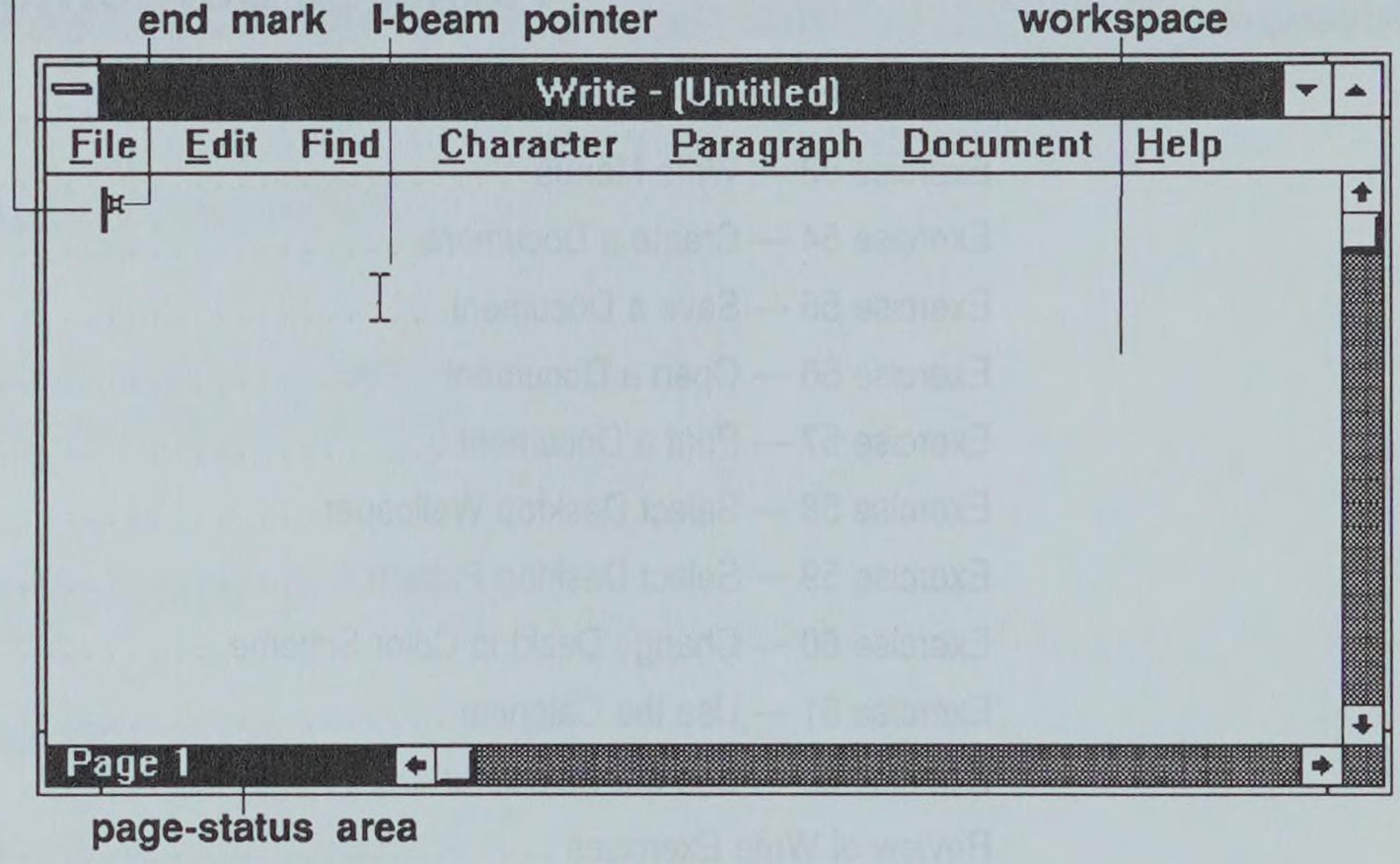
1. **Start Windows**, if necessary.

FROM THE *STARTING WINDOWS* SCREEN:

2. **Open** the **Accessories** window.

3. **Start Write**.

The Write window appears:



*NOTE: The name in the title bar is **Write - [Untitled]**. When a document has a filename (i.e., it is saved or opened), [Untitled] will change to reflect that document's filename.*

4. **Maximize Write.**

NOTE: Because Write allows only one document window, the application title bar and the document title bar are shared; and maximize, minimize, and restore buttons exist only for the Write application window.

Go on to Exercise 53

EXERCISE 53
Write Menus

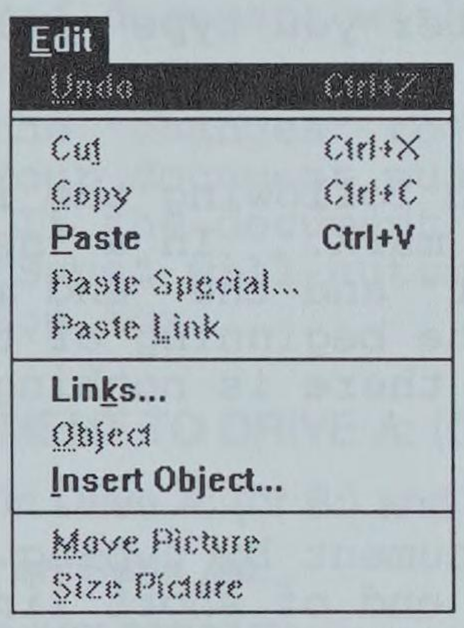
Continue from Exercise 52, doing Exercises 52-57 during the same session.

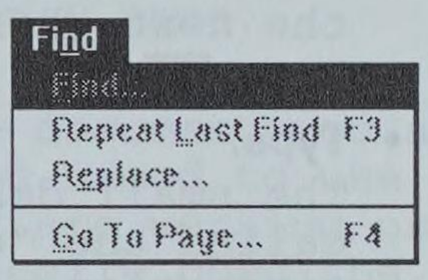
Write menus

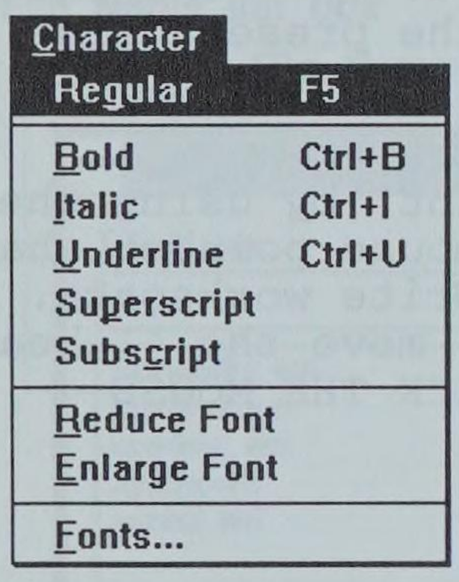
The menus showing on the menu bar when you are in Write, some of which are similar to other Windows menus (such as File and Help) and others which are specific to Write.

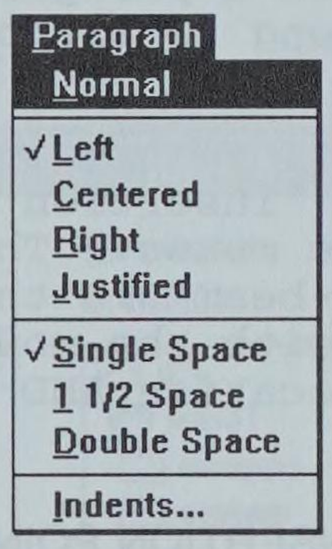
1. LOOK AT EACH DROP-DOWN MENU:
   - **Click** on **File**.
   - **Click** on **Edit**.
   - **Click** on **Find**.
   - **Click** on **Character**.
   - **Click** on **Paragraph**.
   - **Click** on **Document**.
   - **Click** on **Help**.

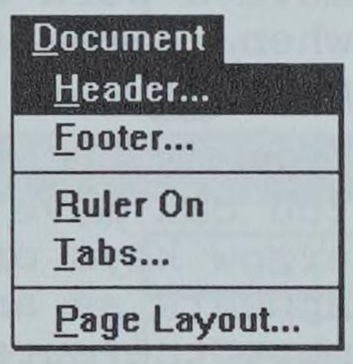
   Each **drop-down** menu is shown below:

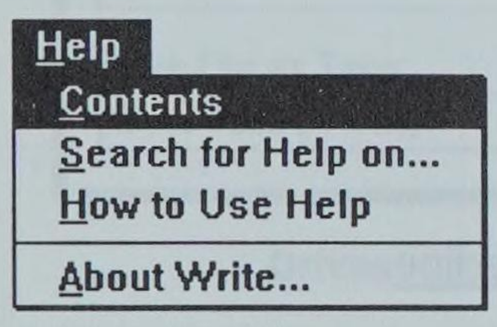












2. **Click off** of the menus to cancel any menu that may still be open.

Go on to Exercise 54

Keyboard Users

WRITE MENUS

OPEN AND CLOSE MENUS:

1. **Press** Alt + F (to open File)
2. **Press** Alt (to close File)
3. Repeat steps 1 and 2, replacing F with the underlined letter of each of the other menus.

EXERCISE 54
Create a Document

Continue from Exercise 53, doing Exercises 52-57 during the same session.

create a document
To type text in the Write window's workspace.

new
The new file option clears the screen (i.e., opens a new document). If you have any unsaved data in Write, new offers you a chance to save it before the new screen appears.

Keyboard Users

CREATE A DOCUMENT

MOVE THE CURSOR:*

To move the insertion point to the:	Press
next space	→
previous space	←
one line up	↑
one line down	↓
next word	Ctrl + →
previous word	Ctrl + ←
end of line	End
beginning of line	Home
end of document	Ctrl + End
beg. of document	Ctrl + Home
next sentence	** 5 + →
previous sentence	5 + ←
next paragraph	5 + ↓
previous paragraph	5 + ↑
next screen down	PgDn
next screen up	PgUp
bottom of window	Ctrl + PgDn
top of window	Ctrl + PgUp
next page	5 + PgDn
previous page	5 + PgUp

**NOTE:* *You cannot move the insertion point past the end of the document.*

**Use the 5 located on the numeric keypad with the Num Lock light turned OFF.

IMPORTANT: When typing text, press ↵ only at the end of short lines and paragraphs. Automatic **word wrap** will move a word that is within a paragraph to the next line when it no longer fits on the present line. Use BkSp (deletes character to the left of cursor) or Del (deletes character to the right of cursor) to correct errors while typing.

1 CREATE A DOCUMENT:

- **Type:**
  When the Write program is started, the cursor (a blinking vertical line) is displayed in the top left corner of the workspace. The cursor is called an "insertion point" because it shows where the next character you type will be inserted.
- **Press** ↵ twice.
- **Type:**
  The small design following the insertion point is called the "end mark." In a "new document" the "insertion point" and the "end mark" are next to each other at the beginning of the document, indicating that there is nothing in the document.
- **Press** ↵ twice.
- **Type:**
  You create a document by typing. Press the ENTER key only at the end of short lines, paragraphs, or to insert blank lines. Write will automatically move a word within a paragraph to the next line when it is too long to fit on the present line.
- **Press** ↵ twice.
- **Type:**
  You can move the "insertion point" by using the arrow keys or the mouse. The mouse pointer shape appears as an "I-beam" in the Write workspace. To move the cursor with the mouse, move the "I-beam" to the desired location AND CLICK THE MOUSE BUTTON.

2 MOVE THE CURSOR (INSERTION POINT):

- **Move** the **I-beam** shaped pointer to the top line.
- **Click** on the middle of the top line.
- **Press** End
  to move the cursor to the end of the line.
- **Press** Home
  to move the cursor to the beginning of the line.
- **Press** Ctrl + End
  to move the cursor to the end of the document.
- **Press** Ctrl + Home
  to move the cursor to the beginning of the document.
- **Press** Ctrl + →
  to move the cursor to the next word.
- **Press** Ctrl + ←
  to move the cursor to the previous word.

3 CLEAR THE SCREEN (OPEN A NEW DOCUMENT):

- **Click** on **File**.
- **Click** on **New**.
- **Click** on **No** (you do not want to save the document).
  NOTE: The document is erased and cannot be retrieved.

Go on to Exercise 53

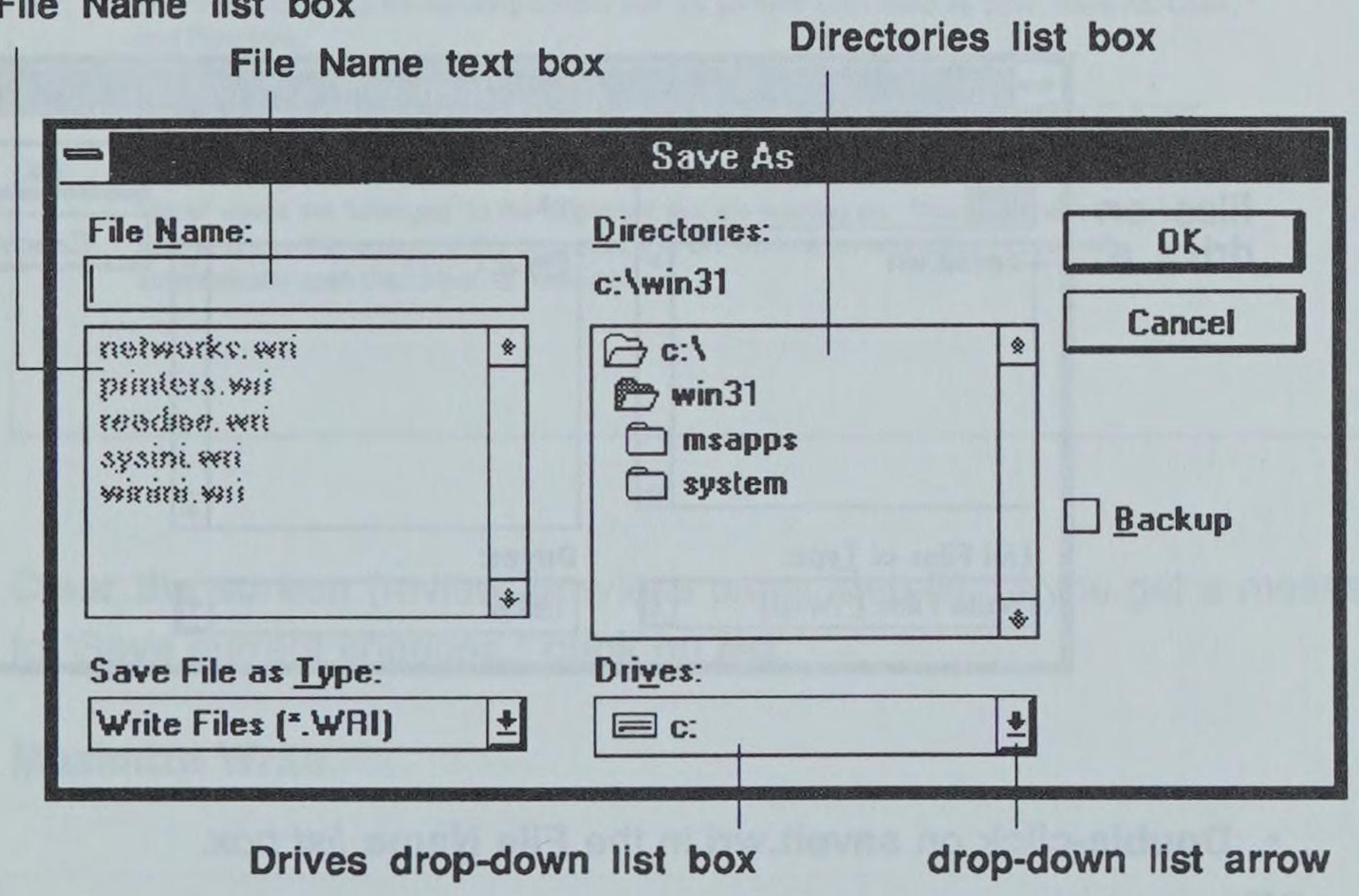
IMPORTANT: This book instructs you to save your files on Drive A: (or B:). Start with a blank, formatted floppy disk. Use a high-density disk if possible.

1 CREATE A DOCUMENT:

- **Type**: `Your Name`
- **Press** ↵ twice, and then **type**:
  `The "File" menu has file handling options that will perform such tasks as Save, Save As, Open, and Print files.`
- **Press** ↵ twice, and then **type**:
  `"Save As" lets you save a new document or save a previously named document with a new name.`
- **Press** ↵ twice, and then **type**:
  `"Save" saves the "changes" to the document you are working on. Your document must be named to use this option. If the document you are working on is untitled, "Save" will automatically open the "Save As" dialog box.`

2 SAVE A NEW DOCUMENT TO DRIVE A: (OR B:):

- Place a blank disk in Drive A: (or B:) and close the door.
- **Click** on **File,** then on **Save As...** .
  The *Save As* dialog box appears:



- **Click** on the **drop-down arrow** to open the **Drives** drop-down list box.
- **Click** on a: (or b:).
  NOTE: You have just changed to Drive A: (or B:).
- **Click** on the **File Name** text box.
- **Type**: `SAVEIT`
- **Press** ↵.

NOTE: Look at the name in the title bar. The filename is displayed, and Write automatically adds a .wri extension to the filename.

Go on to Exercise 56

EXERCISE 55
Save a Document

Continue from Exercise 54, doing Exercises 52-57 during the same session.

save a document
To store a document on a disk.

save
Saves changes to a previously named document that you are working on.

save as...
Saves new documents or lets you rename a previously saved document.

file
A file is a set of data that is saved on a disk as a named unit.

drop-down list box
A box that is similar to a list box except that it must be opened by clicking on the drop-down list arrow next to it.

Keyboard Users

SAVE A DOCUMENT

SAVE NEW DOCUMENT OR RENAME FILE:

1. **Press** Alt + F (File)
2. **Press** A (Save As...)
   IF you want to change the drive:
   - **Press** Alt + V (Drive)
   - **Press** ↓
   - Use arrows to highlight the desired drive.
   - **Press** ↵
3. **Press** Alt + N (File Name)
4. Type a filename.
5. **Press** ↵

SAVE PREVIOUSLY NAMED DOCUMENT:

1. **Press** Alt + F (File)
2. **Press** Alt + S (Save)

EXERCISE 56
Open a Document

Continue from Exercise 55, doing Exercises 52-57 during the same session.

open a document
To retrieve a saved document file from a disk, bringing it into the Write program.

Keyboard Users

OPEN A DOCUMENT

CLEAR THE SCREEN:

1. **Press** Alt + F (File)
2. **Press** N (New)

   IF unsaved text is present, a message asks if you want to "Save current changes."

   - **Press** N (No)

   OR

   - **Press** Y (Yes)
   - Type a filename.
   - **Press** ↵

OPEN A DOCUMENT:

1. **Press** Alt + F (File)
2. **Press** O (Open)

   IF you want to change the drive:

   - **Press** Alt + V (Drive)
   - **Press** ↓
   - Use arrows to highlight the desired drive.
   - **Press** ↵

3. Press Alt + N (File Name)

   - Type a filename.
   - **Press** ↵

   OR

   - **Press** Tab
   - Use arrows to highlight desired file.
   - **Press** ↵

1 CLEAR THE SCREEN (open a new document):

- **Click** on **File**, then on **New**.

  NOTE: Since you just saved your document, Write immediately clears the screen with no questions asked. If there were changes, a dialog box would appear asking if you want to "Save current changes."

2 **Exit Write.**

3 **Start Write.**

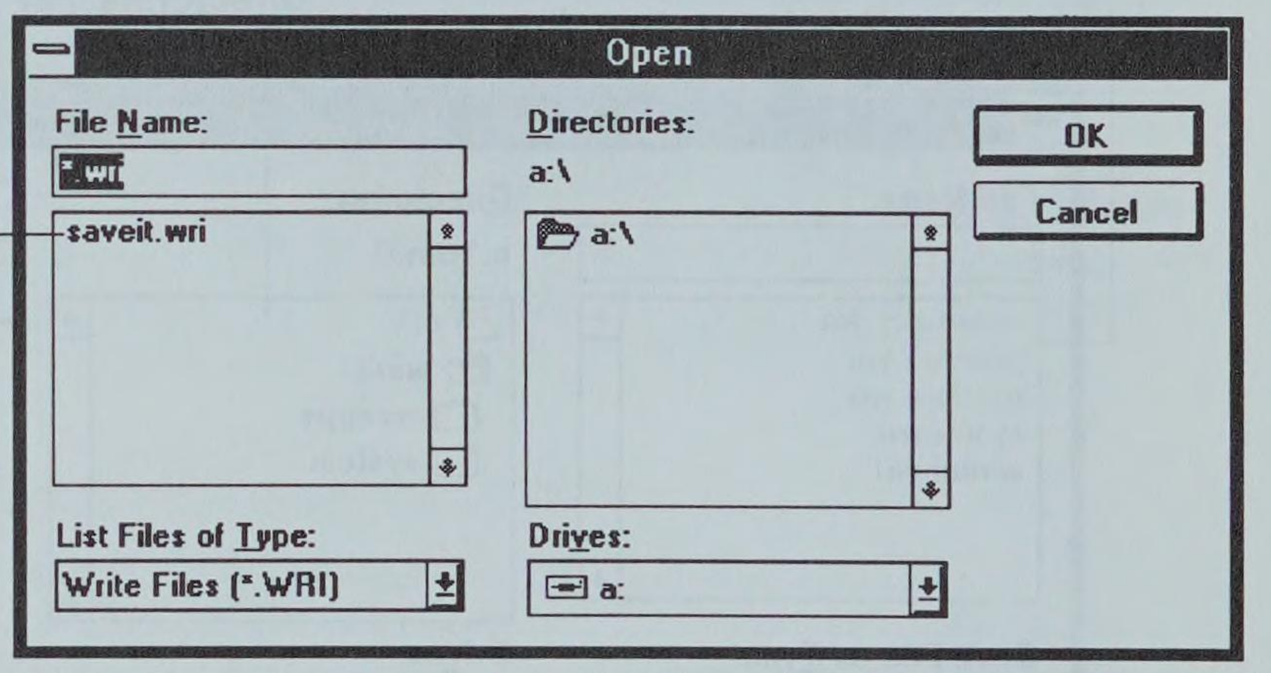
IMPORTANT: Because you exited Write since the last time you accessed your file, the default drive has changed back to Drive C:. Each time you **start** Write, you must change to Drive A: (or B:) if you want to **save** and **open** files on that drive. This is done most conveniently the first time you **save** or **open** a document file.

4 OPEN A DOCUMENT FILE:

- **Click** on **File**, then on **Open**.

  The *Open* dialog box appears. Notice that, except for its title, it is like the *Save As* dialog box on the previous page.
- **Click** on the **Drives** drop-down list box.
- **Click** on a: (or b:).

  The *Open* dialog box now displays the files on the disk in Drive A: (or B:):



- **Double-click** on **saveit.wri** in the **File Name** *list box.*

OR

- **Click** on **saveit.wri** in the **File Name** *list box.*
- **Click** on OK.

5 CLEAR THE SCREEN:

- **Click** on **File**, then on **New**.

  NOTE: The new document is displayed in the title bar as: Write - [Untitled]. The document, saveit.wri, is still saved and can be retrieved again.

6 **Exit Write.**

Go on to Exercise 57

EXERCISE 57
Print a Document

Continue from Exercise 56, doing Exercises 52-57 during the same session.

ASSUMPTION:

It is assumed that your printer has been properly installed.

print a document

To copy information from a document in the Write program onto paper.

1. **Start Write.**

2. **Open** the document file named **saveit.wri** (review, previous page).

*NOTE: Always be sure to close the drive door after you put the disk in. If you do not, you will get an error message saying: Cannot read drive a:... . If this happens, close the door and **click** on **Retry** in the error message dialog box.*

*NOTE: If you have made any changes in Write's work area, you will get a message which asks: Save current changes? **Click** on **No**, and Write will continue to process your original command.*

3. PRINT A DOCUMENT:

*NOTE: **Write** has **default** settings in the **printer setup** that best fit most standard situations, which include what is needed for exercises in this book.*

- **Make** sure your printer is ready to receive data.
- **Click** on **File**, then on **Print...** .
- **Click** on [OK].

*NOTE: A message briefly appears that allows you to **cancel** the print job if desired.*

RESULT — **SAVEIT**:

Line endings may vary slightly.

> Your Name
>
> The "File" menu has file handling options that will perform such tasks as Save, Save As, Open, and Print files.
>
> "Save As" lets you save a new document or save a previously named document with a new name.
>
> "Save" saves the "changes" to the document you are working on. Your document must be named to use this option. If the document you are working on is untitled, "Save" will automatically open the "Save As" dialog box.

4. **Clear the screen** (review, previous page, step 5). If you get a message to "Save current changes," **click** on **No**.

5. **Maximize Write.**

Keyboard Users

PRINT A DOCUMENT

1. **Press** Alt + F (File)
2. **Press** P (Print)
3. Make sure your printer is ready to receive data.
4. **Press** ↵

EXERCISE 58
Select a Desktop Wallpaper

Exercises 58-60 should be done during the same session.

select a desktop wallpaper
To select a picture that is repeated to cover the desktop.

desktop wallpaper
A picture that is repeated to create a wallpaper effect across the desktop. Wallpaper is usually a larger design and more elaborate than a desktop pattern. Wallpaper is stored in a file with a .BMP extension. The files are accessible through Paintbrush, and new wallpaper designs can be created in Paintbrush.

Keyboard Users

SELECT A DESKTOP WALLPAPER

From the Starting Windows screen, with the Main window open:

1. **Start** the Control Panel.
2. **Open** Desktop.
3. **Press** Alt + F (File)
4. **Press** Alt + ↓ (open the list box)
5. **Press** ↓ and ↑ until the desired wallpaper is highlighted.
6. **Press** ↵
7. **Close** the Control Panel.

❶ **Start Windows**, if necessary.

FROM THE *STARTING WINDOWS* SCREEN:
(With the *Main* window open)

❷ • **Double-click** on

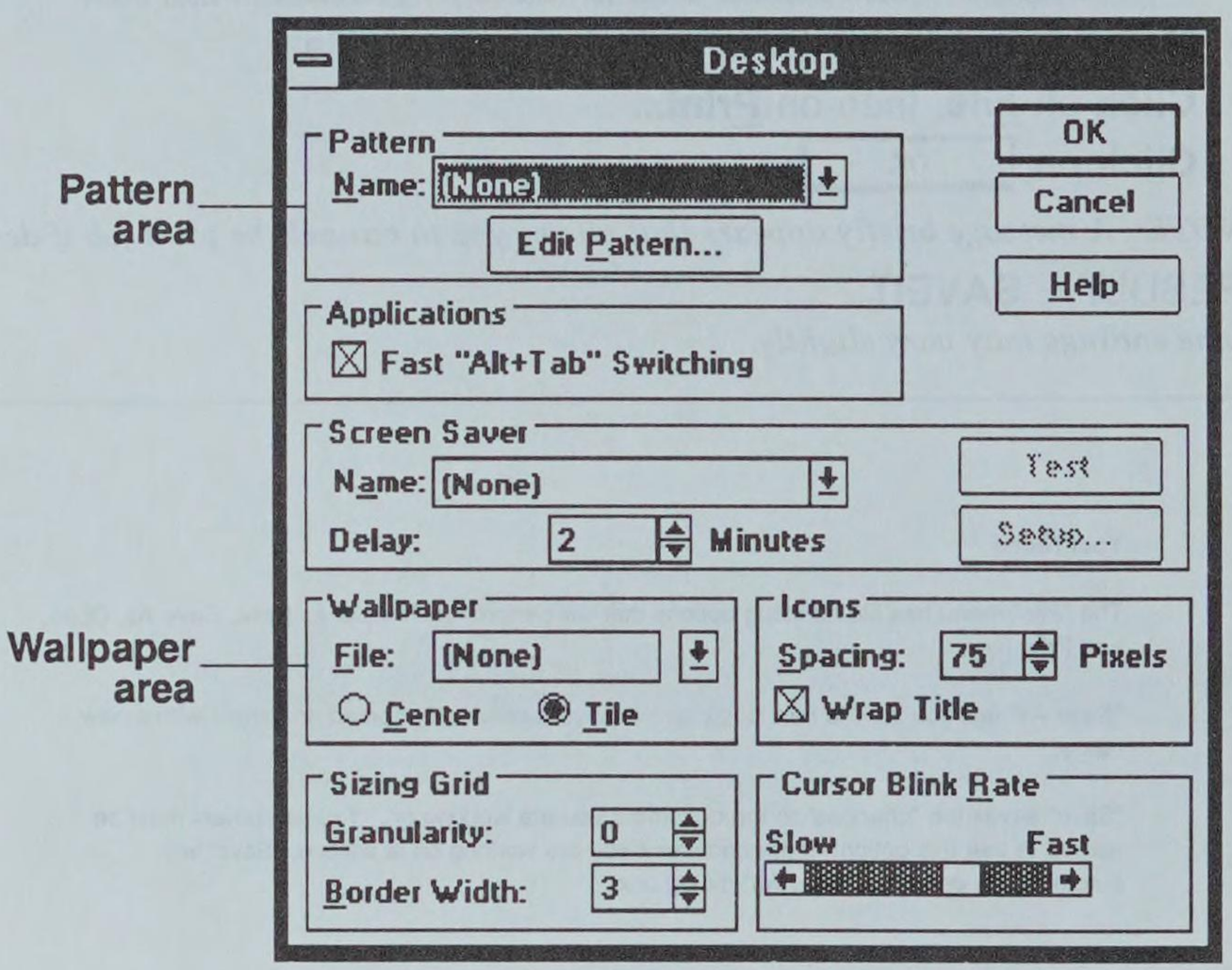
.

The *Control Panel* window opens.

• **Double-click** on

.

The *Desktop* window opens:



❸ • **Click** on the **File** *drop-down list box.*
A list of wallpaper choices drops down.
• **Scroll** through the list.
• **Click** on **Honey**.
• **Click** on [OK].

Honey wallpaper covers the desktop.

❹ • **Double-click** on the **Desktop** icon.
• **Click** on the **File** *drop-down list box.*
• **Scroll** through the list and **click** on the wallpaper of your choice.
• **Click** on [OK].
• Repeat step 4 to view different wallpapers as desired.

❺ CHANGE WALLPAPER BACK TO "NONE":
• **Double-click** on **Desktop**.
• **Click** on the **File** *drop-down list box.*
• **Scroll** to the top of the list and **click** on **(None)**.
• **Click** on [OK].

Go on to Exercise 59

EXERCISE 59
Select a Desktop Pattern

Continue from Exercise 58, doing Exercises 58-60 during the same session.

select a desktop pattern
To select a design that is repeated to cover the desktop.

desktop pattern
A small design that is repeated to create a pattern across the desktop.

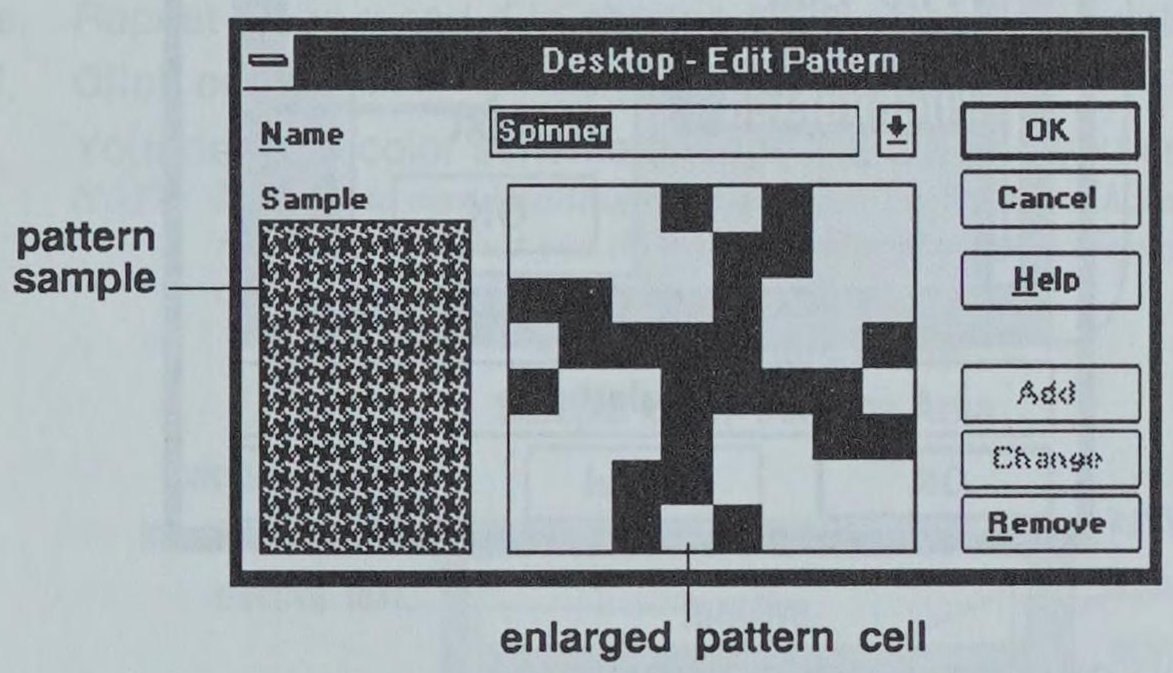
1 SELECT A DESKTOP PATTERN:

With the *Control Panel* open:

- **Double-click** on **Desktop**.
  The *Desktop* window opens (see illustration on previous page).
- **Click** on the **Name** *drop-down list box.*
  A list of patterns drops down.
- **Scroll** through the list.
- **Click** on **Spinner**.
- **Click** on [OK].
  The Spinner pattern covers the desktop area.

2 VIEW OR EDIT DESKTOP PATTERNS:

- **Double-click** on **Desktop**.
- **Click** on the **Name** *drop-down list box.*
- **Click** on **Spinner** (it should already be selected).
- **Click** on **Edit Pattern...** .
  The *Desktop - Edit Pattern* dialog box appears:



3 VIEW PATTERNS AND SELECT A PATTERN:

- **Click** on the **Name** *drop-down list box.*
- **Scroll** through the box and **click** on any pattern.
  The pattern is displayed in the Sample box.
- Repeat the two directions above until you see a pattern you like.
- **Click** on [OK] (in the *Desktop - Edit Pattern* window).
- **Click** on [OK] (in the *Desktop* window).

4 CREATE A NEW PATTERN:

- **Double-click** on **Desktop**.
- **Click** on the **Name** *drop-down list box.*
- **Scroll** to the top of the box and **click** on **(None)**.
- **Click** on **Edit Pattern...** .
- Type a name for the new pattern in the Name box.
- **Click** in the enlarged pattern cell to create a new pattern.
- **Click** on **Add**, then on [OK].
- **Click** on [OK] (in the *Desktop* window).

5 CHANGE PATTERN BACK TO "NONE":

- **Double-click** on **Desktop**.
- **Click** on the **Name** *drop-down list box.*
- **Scroll** to the top of the list and **click** on **(None)**.
- **Click** on [OK].

6
- **Close** the **Control Panel**.

Go on to Exercise 60

Keyboard Users

SELECT A DESKTOP PATTERN

From the Starting Windows screen, with the Main window open:

1. **Start** the Control Panel.
2. **Open** Desktop.
3. **Press** Alt + N (Name)
4. **Press** Alt + ↓ (to open the list box)
5. **Press** ↓ and ↑ until the desired pattern is highlighted.
6. **Press** ↵
7. **Close** the Control Panel.

EXERCISE 60

Change Desktop Color Scheme

Continue from Exercise 59, doing Exercises 58-60 during the same session.

change desktop color scheme
To select a new color scheme from a predefined list of color schemes, or to change or create your own color scheme.

color scheme
A combination of colors that Windows uses for its screen elements.

sample color scheme area
An area in the Color window with Windows elements that change to match the highlighted color scheme. Use the sample color scheme area to decide if you like a color scheme before selecting it for your desktop.

Keyboard Users

CHANGE DESKTOP COLOR SCHEME

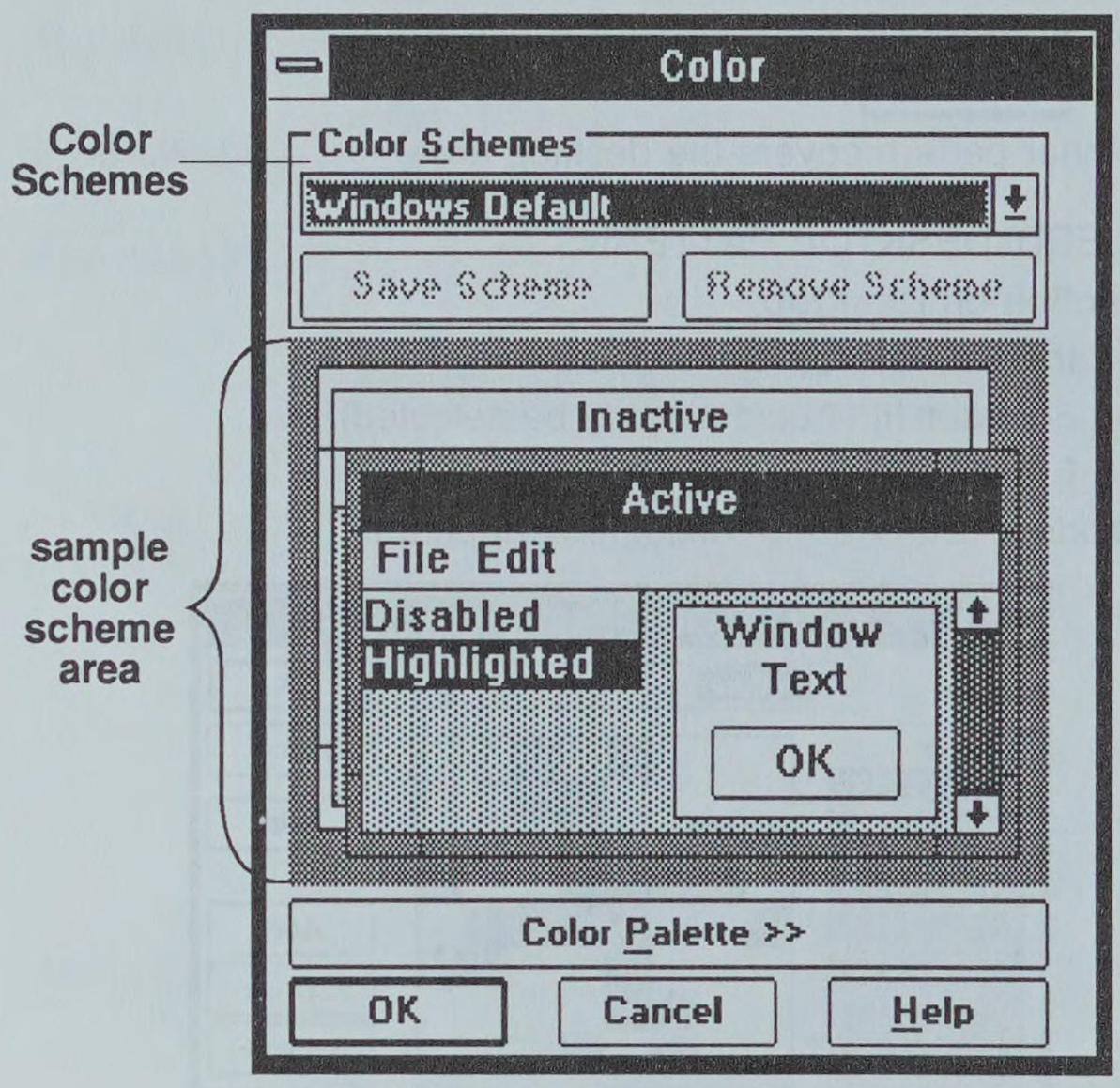
From the Starting Windows Screen, with the Main window open:

1. **Start** Control Panel.
2. **Open** Color.
3. **Press** Alt + S (Color Schemes)
4. **Press** Alt + ↓ (to open the list box)
5. **Press** ↓ and ↑ to scroll through the color schemes, and notice the *sample color scheme area* change to match the highlighted color scheme.
6. Highlight the desired color scheme.
7. **Press** ↵
8. **Close** the Control Panel.

❶ **Start** the **Control Panel**.

❷ **Double-click** on Color.

The *Color* window opens:



❸ VIEW AND SELECT A COLOR SCHEME:

- **Click** on the **Color Schemes** *drop-down list box* arrow.
  A list of *Color Scheme* choices drops down.
- **Scroll** through the list.
- **Click** on **Arizona**.
  Notice that the *sample color scheme* changes.
- **Click** on the **Color Schemes** *drop-down list box* arrow again.
- **Press** ↓ and ↑ to **scroll** through the list; notice the *sample color scheme* box change to display each highlighted color scheme.
- **Click** on the **color scheme** that you want.
- **Click** on [OK].
  Your desktop color scheme changes to the one you chose.

❹ CHANGE THE COLOR SCHEME BACK TO "WINDOWS DEFAULT":
With the *Control Panel* still open:

- **Double-click** on **Color**.
- **Click** on the **Color Schemes** *drop-down list box* arrow.
- **Scroll** to the top of the list.
- **Click** on **Windows Default**.
- **Click** on [OK].

Continue Exercise 60 on the next page

5 CREATE A COLOR SCHEME:

With the *Control Panel* open:

a. **Double-click** on **Color**.

b. **Click** on **Color Palette>>**.
The color palette is added to the *Color* window. It includes a drop-down list of *screen elements*, a palette of *Basic Colors*, and a palette for *Custom Colors*.

c.
- **Click** on a screen element in the *sample color scheme area* you want to change.

OR

- **Click** on the **Screen Elements** *drop-down list box*.
- **Click** on the desired screen element.

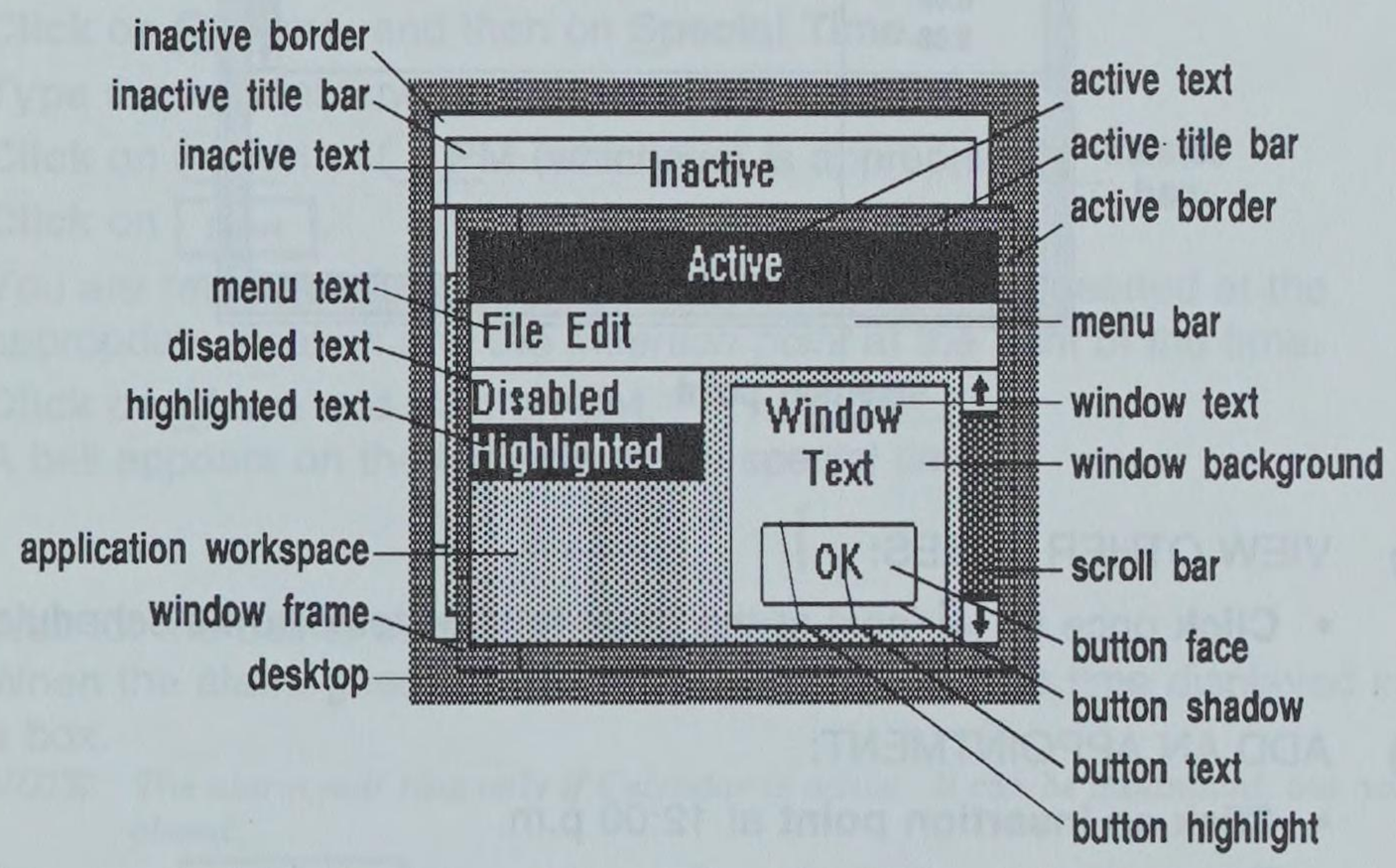
d. **Click** on a **color** in the *Basic Color* palette.
The color is displayed in the *sample screen*.

e. Repeat steps c and d to change other screen elements as desired.

f. **Click** on [OK] when your screen is done.
Your desktop color scheme changes to the one you created.

NOTE: In order to avoid adding color schemes to classroom hard disks, it is recommended that you do not save color schemes unless you own your own computer.

Screen elements in the Sample Color Scheme Area



6 CHANGE THE COLOR SCHEME BACK TO "WINDOWS DEFAULT":

With the *Control Panel* still open:

- **Double-click** on **Color**.
- **Click** on the **Color Schemes** *drop-down list box* arrow.
- **Scroll** to the top of the list.
- **Click** on **Windows Default**.
- **Click** on [OK].

7
Go on to Exercise 61.

OR

Exit Windows.

EXERCISE 60 (continued)

CHANGE DESKTOP COLOR SCHEME

create desktop color scheme

To change the color for any of the screen elements as desired.

screen elements

desktop
application workspace
window background
window text
menu bar
menu text
active title bar
inactive title bar
active title bar text
inactive title bar text
active border
inactive border
window frame
scroll bars
button face
button shadow
button text
button highlight
disabled text
highlight
highlighted text

Keyboard Users

CREATE DESKTOP COLOR SCHEME

From the Starting Windows Screen, with the Main window open:

1. **Start** the Control Panel.
2. **Open** Color.
3. **Press** Alt + P (Color Palette)
   The color palette opens.
4. **Press** Alt + E (Screen Elements)
5. **Press** Alt + ↓ (to open the list box)
6. **Press** ↓ and ↑ until the desired *screen element* is highlighted.
7. **Press** Space (to select a screen element)
8. **Press** Tab (to move to the color palette)
9. **Press** ↑↓ (to select the desired color)
10. **Press** Space (to choose the color)
11. Repeat steps 4-10 to change other screen elements.
12. **Press** ↵
    New desktop colors appear.
13. **Close** the Control Panel.

EXERCISE 61
Use the Calendar

use Calendar

To use Windows' Calendar's program to:

view other dates
add an appointment
save a calendar file
open a calendar file
toggle day and month view
insert a special time
set the alarm
turn the alarm off
delete special time

Calendar

A month-at-a-glance calendar, a daily appointment book, and an alarm clock.

Keyboard Users

START FILE MANAGER

From the Starting screen:

1. **Open Accessories**.
2. **Start Calendar**.

VIEW TOMORROW'S SCHEDULE:

1. **Press** Ctrl + PgDn

ADD AN APPOINTMENT:

1. **Press** Tab until *insertion point* is in the appt. area.
2. **Press** ↑ or ↓ to move *insertion point* to desired time.
3. **Type** the desired message.

SAVE A CALENDAR:

1. **Press** Alt + F (File)
2. **Press** A (Save As...)
3. **IF** you want to change the drive:
   - **Press** Alt + V (Drive)
   - **Press** ↓
   - Use arrows to highlight the desired drive.
   - **Press** ↵
4. **Press** Alt + N (File Name)
5. Type a filename.
6. **Press** ↵

EXIT CALENDAR:

1. **Exit Calendar**.

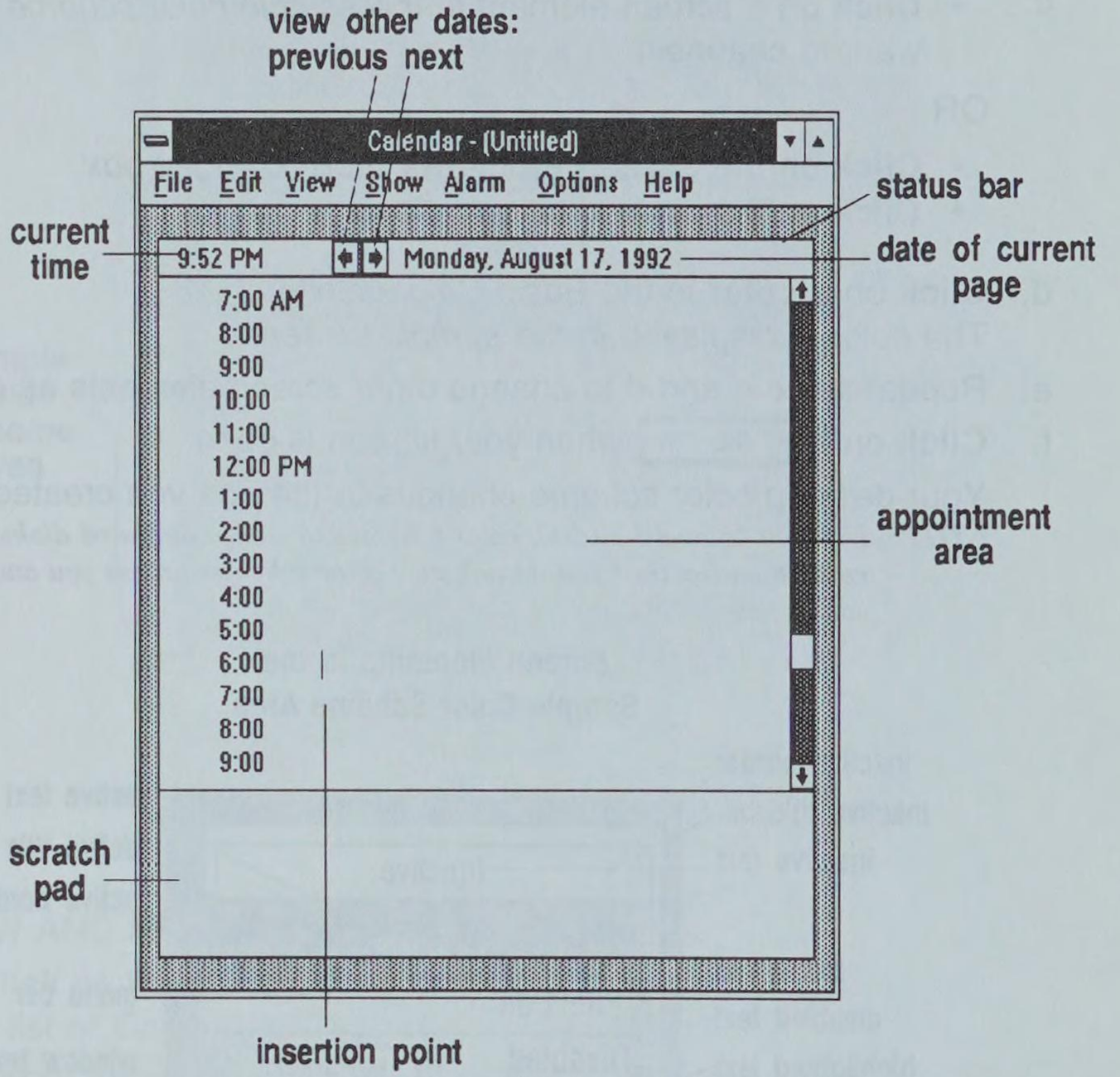
continued on next page...

1. **Start Windows**, if necessary.

FROM THE *STARTING WINDOWS* SCREEN:

2. START CALENDAR:
   - **Open Accessories**.
   - **Double-click** on .
     Calendar

     The Calendar window appears:



3. VIEW OTHER DATES:
   - **Click** once on ▸ (next to the date) to view tomorrow's schedule.

4. ADD AN APPOINTMENT:
   - **Click** an **insertion point** at 12:00 p.m.
   - **Type**: `Lunch with Hazel`

5. SAVE A CALENDAR FILE:
   - Place your disk in Drive A: (or B:) and close the door.
   - **Click** on **File**.
   - **Click** on **Save As...** .
     The *Save As* dialog box appears.
   - **Select** Drive A: (or B:) from the **Drives** *drop-down list box.*
   - **Click** on the **File Name** *text box*, and **type**: APPTS
   - **Click** on [OK].

6. EXIT CALENDAR:
   - **Double-click** on the Calendar's ▭ (control box).

Continue Exercise 61 on the next page

7. • **Start Calendar**, again.
   • Notice that the date defaults back to today's date.

8. OPEN A CALENDAR FILE:
   • **Click** on **File**.
   • **Click** on **Open...** .
   The *Open* dialog box appears.
   • **Select** Drive A: (or B:).
   • **Double-click** on **appts.cal** (in the File Name *list box*).

9. DISPLAY THE APPOINTMENT YOU ADDED:
   • **Click** once on ▶ (next to the date).
   The lunch appointment should be displayed.
   • **Click** once on ◀ to return to current date.

10. TOGGLE BETWEEN *DAY VIEW* AND *MONTH VIEW*:
   • **Double-click** on the **current date status bar**.
   The *month view* calendar is displayed.
   • **Double-click** on the **current date status bar**.
   The *day view* calendar is displayed.

11. INSERT A SPECIAL TIME, AND SET THE ALARM:
   • Note the time displayed on the left end of the status bar and add 3 minutes to the time.
   • **Click** on **Options**, and then on **Special Time...** .
   • **Type** the special time (the current time + 3 minutes)
   • **Click** on ◯ AM or ◯ PM (whichever is appropriate).
   • **Click** on [Insert].
   You are returned to the Calendar with the new time inserted at the appropriate location and the *insertion point* at the right of the time.
   • **Click** on **Alarm** and then on **Set**.
   A bell appears on the left side of the special time.

   🔔 3:22

   • Wait for the bell to sound (a dim sound).
   When the alarm goes off, a window appears with the time displayed in a box.
   NOTE: The alarm will ring only if Calendar is active. It can be minimized, but not closed.
   • **Click** on [OK].

12. TURN THE ALARM OFF, AND DELETE THE SPECIAL TIME:
   • With the *Insertion Point* still at the *new* time,
   • **Click** on **Alarm** and then on **Set** (to deselect it).
   • **Click** on **Options** and then on **Special Time...** .
   • **Click** on [Delete].

13. **Exit Calendar**.

14. **Go** on to Exercise 62.

OR

Exit Windows.

USE CALENDAR

Keyboard Users (continued)

OPEN A CALENDAR FILE:

1. **Press** Alt + F (File)
2. **Press** O (Open)
   IF you want to change the drive: see instructions on previous page.
3. Press Alt + N (File Name)
   • Type a filename.
   • **Press** ↵

   OR

   • **Press** Tab
   • Use arrows to highlight desired file.
   • **Press** ↵

TOGGLE DAY AND MONTH VIEW:

1. **Press** Alt + V (View)
2. **Press** M (for Month view)

   OR

   Press D (for Day view)

INSERT A SPECIAL TIME:

1. **Press** Alt + O (Options)
2. **Press** S (Special Time...)
3. **Type** the desired time.
4. **Press** Alt + A (for AM)
   OR
   Press Alt + P (for PM)
5. **Press** Alt + I (Insert)

SET THE ALARM:

1. **Move** *insertion point* to desired time.
2. **Press** Alt + A (Alarm)
3. **Press** S (Set)

TURN OFF ALARM:

1. **Move** *insertion point* to desired time where a bell is displayed.
2. **Press** Alt + A (Alarm)
3. **Press** S (Set)

DELETE SPECIAL TIME:

1. **Move** *insertion point* to time to be removed.
2. **Press** Alt + O (Options)
3. **Press** S (Special Time...)
4. **Press** Alt + D (Delete)

EXERCISE 62
Use the Calculator

use Calculator

To use Windows' Calculator program to:

add
subtract
multiply
divide
edit the display
store values
recall values
clear the memory and
add to the memory.

Calculator

Windows' Calculator has two modes: Standard and Scientific. The Standard calculator lets you do basic calculations, while the Scientific calculator lets you do advanced scientific and statistical calculations.

display

The display area is where the calculator shows numbers.

display edit buttons

The display edit buttons let you change numbers in the display area and clear a calculation.

memory buttons

The memory buttons let you use the calculator's memory area.

Keyboard Users

USE CALCULATOR

Use the Calculator Functions shown on the right (step 3) to find the keystrokes to perform the action described.

TOGGLE CALCULATOR MODES:

1. **Press** Alt + V (View)
2. **Press** S (Scientific)

   OR

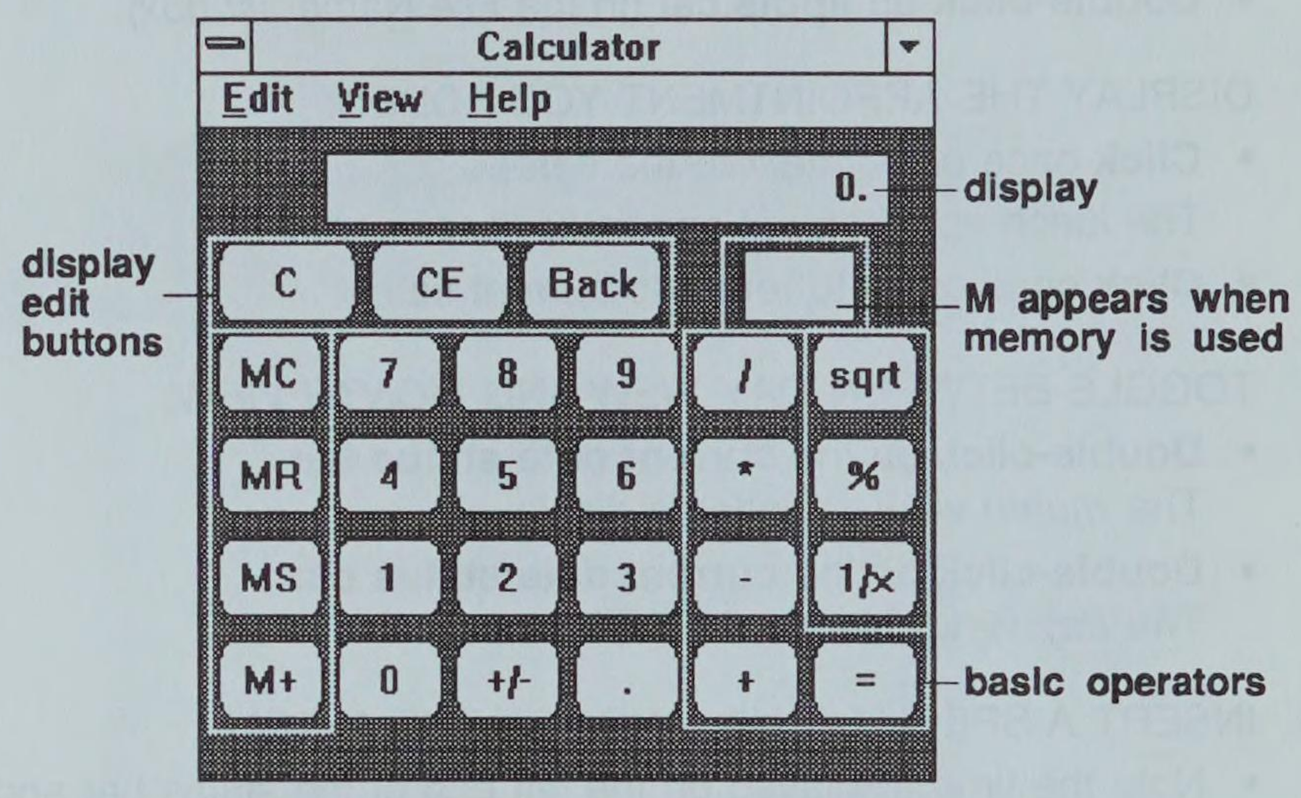
   Press T (Standard)

1. **Start Windows**, if necessary.

FROM THE *STARTING WINDOWS* SCREEN:

2. START CALCULATOR:
   - **Open Accessories**.
   - **Double-click** on Calculator.

   The *Standard Calculator* window appears:



3. Examine Calculator functions:

click on button	or *press* key	action
+	+	add
-	-	subtract
*	*	multiply
/	/	divide
=	= or ↵	calculate answer
C	Esc	clear calculator
CE	Del	clear last number
Back	BkSp	clear last digit
MC	Ctrl + L	memory, clear
MR	Ctrl + R	memory, recall value
MS	Ctrl + M	memory, store value
M+	Ctrl + P	memory, add value

Continue Exercise 62 on the next page

Exercise 62 (continued)

NOTE: The following instructions ask you to use the mouse with the calculator. If you prefer to use the keyboard, be sure the Num Lock light is on, then use the numeric keypad to type the numbers. To perform the functions, press the appropriate key instead of clicking on the indicated function buttons (see Examine Calculator functions on the previous page).

PERFORM STANDARD CALCULATIONS:

4 ADD 28 AND 56:

- **Click** on [2], then on [8].
  The number is displayed: 28.
- **Click** on [+].
- **Click** on [5], then on [6].
  The number is displayed: 56.
- **Click** on [=].
  The answer is displayed: 84.

5 SUBTRACT 24 FROM 60:

NOTE: You do not need to clear the calculator when you begin a new calculation if the previous calculation ended with [=].

- **Click** on [6], [0], [−], [2], [4], then on [=].
  The answer is displayed: 36

6 MULTIPLY 9 TIMES 6:

- **Click** on [9], [*], [6], then on [=].
  The answer is displayed: 54

7 DIVIDE 50 BY 4:

- **Click** on [5], [0], [/], [4], then on [=].
  The answer is displayed: 12.5

USE FUNCTION BUTTONS TO EDIT THE DISPLAY:

8

- **Click** on [2], [8], [9], [4], [3].
  Oops! You meant to enter 28946.
- **Click** on [Back], then on [6].
- **Click** on [C] to clear the calculator.
- Add 234 and 678:
  - **Click** on [2], [3], [4], [+], [6], [7], [8].
    Oops! The second number has been changed to 548.
  - **Click** on [CE], then on [5], [4], [8], then on [=].
    The answer is displayed: 782
- **Click** on [C] to clear the calculator (just to see it return the display to 0).

USE MEMORY:

9 Multiply 15 * 4, then add 10, 15, and 20 to the result.

- **Click** on [1], [5], [*], [4], then on [=].
  The answer is displayed: 60

  STORE A VALUE IN MEMORY:
- **Click** on [MS] (60 is stored in the memory).
  "M" appears in the box below the display to indicate that the memory has a value stored in it.
- **Click** [+], then on [1], [0], then on [=].
  The answer is displayed: 70

Continue Exercise 62 on the next page

EXERCISE 62 (continued)
USE CALCULATOR

Exercise 62, step 9 (continued)

RECALL A VALUE FROM MEMORY:

- **Click** on [MR].
  60 appears in the display (and remains in memory).
- **Click** [+], then on [1], [5], then on [=].
  The answer is displayed: 75
- **Click** on [MR]; 60 appears in the display.
- **Click** [+], then on [2], [0], then on [=].
  The answer is displayed: 80

CLEAR THE MEMORY:

- **Click** on [MC].
  The "M" disappears from the box below the display to indicate that the memory is clear.

10 Use "memory +" to total the results of 3 * 5, 4 * 5, and 5 * 5.

- **Click** on [3], [*], [5], then on [=]; 15 is displayed.
- **Click** on [MS] (to store the value in memory).
- **Click** on [4], [*], [5], then on [=]; 20 is displayed.

ADD THE VALUE TO MEMORY:

- **Click** on [M+].
  You just added 20 to the original value (15) in memory. The value in memory is now 35.

CHECK TO SEE IF MEMORY IS HOLDING 35:

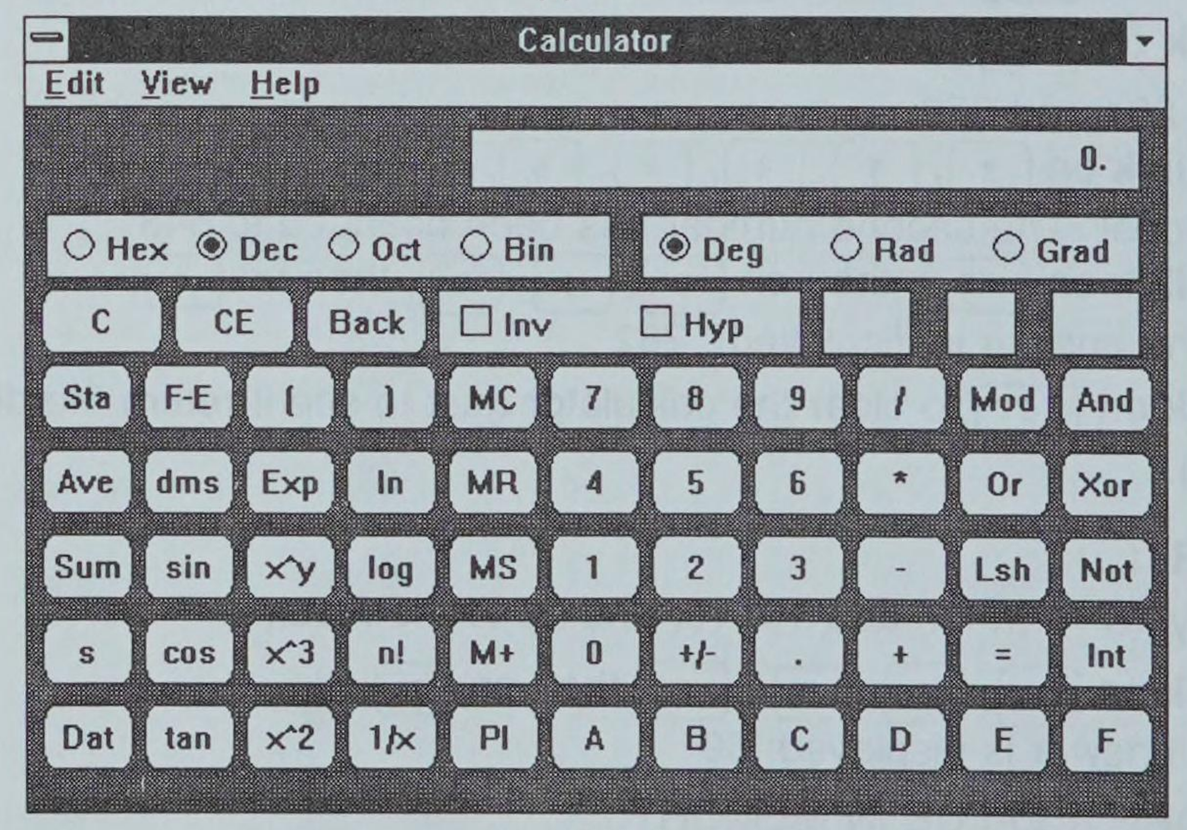
- **Click** on [MR] (memory recall); 35 should be displayed.
- **Click** on [5], [*], [5], then on [=]; 25 is displayed.
- **Click** on [M+] (to add the value to memory).
- **Click** on [MR] (memory recall); 60 should be displayed.

VIEW THE SCIENTIFIC CALCULATOR:

11

- **Click** on **View,** then on **Scientific**.

The *Scientific Calculator* appears:



NOTE: You can perform more complex calculations using the Scientific Calculator than you can using the Standard Calculator.

- **Click** on **View**, then on **Standard**.
- **Exit Calculator**.

12 **Exit Windows.**

Lesson Five
Review of Write Exercises

Lesson Five (Write) covers tasks that:

Start Write and Examine the Menus

Create, Save, Open and Print a Document

POINTS TO EMPHASIZE

Compare and Contrast

Save and **Save As**:

- *Save* is used to save **changes** in a previously saved (and named) file.
- *Save As* is used to **name** and save a **new** file or to save a previously named file under a **new name**.

Write's Title Bar for a New Document and **Write's Title Bar for a Saved Document**:

- When starting with a **clear screen** (also called a *new document*) or if there is data in the work area that has not been saved, Write's *title bar* displays: Write - [Untitled].
- When a document has a **name** (i.e., it has been saved or opened), Write's *title bar* displays: Write - FILENAME.WRI, (where the real filename replaces FILENAME).

Saving Files

To minimize the potential for causing errors on the hard disk, this book directs you to save your files on a floppy disk drive. Files saved in this lesson and the next lesson are used in the File Manager lesson.

Naming Files

Write automatically puts the filename extension .WRI at the end of your filename to identify the file as a Write file. For more information about files and file naming, review "File Manager" (page 27).

ADDITIONAL INFORMATION

Fonts

An assortment of Windows' *TrueType* fonts is part of your Windows program. TrueType fonts should be available for use with *dot matrix*, *ink jet*, and *laser* printers (but not with *daisy wheel* printers). Your built-in printer fonts are available also. Fonts have three aspects that affect their appearance.

1. *Design of characters* is called typeface (or font).
2. *Treatment of characters* (i.e., bold, italic, etc.) is called type style.
3. *Size of characters* in TrueType fonts is measured in points (the larger the point size, the larger the font).

Editing Documents

Except for simple deletions and insertions, text to be edited must first be highlighted. Once data is highlighted, it can be *cut*, *copied*, or *pasted* by using the Edit menu.

Aligning Text

Text alignment is changed from the Paragraph menu by choosing one of four options: *centered*, *left*, *right*, or *justified*.

WORKSHEET 26

NAME _____

WRITE TERMS

DIRECTIONS: Match the terms listed below to the definition that best fits the term.

New	I-beam	Write	drop-down list box
file	end mark	insertion point	
Save	Save As...	page-status area	

1. Which File option clears the screen (i.e., opens a new document)? 1) _____

2. What is the small icon (⌘) that identifies the end of a document? 2) _____

3. What command saves new documents or lets you rename a previously saved document? 3) _____

4. What is the pointer shape used in Write's work area? 4) _____

5. What is a set of data that is saved on a disk as a named unit? 5) _____

6. What is the blinking vertical line that shows where text will appear when you type? 6) _____

7. What area in Write tells you what page is showing on the screen (only after you repaginate the document)? 7) _____

8. What command saves changes to a previously named document file that you are working on? 8) _____

9. What kind of box is opened by clicking on the arrow next to it? 9) _____

10. What is Windows' word processor? 10) _____

(This page may be copied.)

Appendices

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APPENDIX A – DOS Commands and Definitions

This is a list of MS-DOS® commands and short definitions compiled from HELP (MS-DOS 5.0) and FASTHELP (MS-DOS 6.0). Commands with a 5 by them are available to DOS 5 users only, and commands a 6 by them are available to DOS 6 users only. **The Commands below which are bolded and have an asterisk by them are covered in this book.**

APPEND		Allows programs to open data files in specified directories as if they were in the current directory.
ASSIGN	5	Redirects requests for disk operations on one drive to a different drive.
ATTRIB		Displays or changes file attributes.
BACKUP	5	Backs up one or more files from one disk to another.
BREAK		Sets or clears extended CTRL+C checking.
CALL		Calls one batch program from another.
***CD**		**Displays the name of or changes the current directory.**
CHCP		Displays or sets the active code page number.
CHDIR		Displays the name of or changes the current directory.
***CHKDSK**		**Checks a disk and displays a status report.**
***CLS**		**Clears the screen.**
COMMAND		Starts a new instance of the MS-DOS command interpreter.
COMP		Compares the contents of two files or sets of files.
***COPY**		**Copies one or more files to another location.**
CTTY		Changes the terminal device used to control your system.
***DATE**		**Displays or sets the date.**
DBLSPACE	6	Sets up or configures DoubleSpace compressed drives.
DEBUG		Runs Debug, a program testing and editing tool.
DEFRAG	6	Reorganizes the files on a disk to optimize the disk.
***DEL**		**Deletes one or more files.**
DELOLDOS	6	Deletes the OLD_DOS.1 directory and the files it contains.
***DELTREE**	**6**	**Deletes a directory and all the files and subdirectories in it.**
***DIR**		**Displays a list of files and subdirectories in a directory.**
DISKCOMP		Compares the contents of two floppy disks.
***DISKCOPY**		**Copies the contents of one floppy disk to another.**
DOSKEY		Edits command lines, recalls MS-DOS commands, and creates macros.
DOSSHELL		Starts MS-DOS Shell.
ECHO		Displays messages, or turns command echoing on or off.
EDIT		Starts MS-DOS Editor, which creates and changes ASCII files.
EDLIN	5	Starts Edlin, a line-oriented text editor.
EMM386		Turns on or off EMM386 expanded memory support.
ERASE		Deletes one or more files.
EXE2BIN	5	Converts .EXE (executable) files to binary format.
EXIT		Quits the COMMAND.COM program (command interpreter).
EXPAND		Expands one or more compressed files.
***FASTHELP**	**6**	**Provides summary Help information for MS-DOS commands.**
FASTOPEN		Decreases the amount of time needed to open frequently used files and directories.
FC		Compares two files or sets of files, and displays the differences between them.
FDISK		Configures a hard disk for use with MS-DOS.
FIND		Searches for a text string in a file or files.
FOR		Runs a specified command for each file in a set of files.
***FORMAT**		**Formats a disk for use with MS-DOS.**
GOTO		Directs MS-DOS to a labelled line in a batch program.
GRAFTABL	5	Enables MS-DOS to display an extended character set in graphics mode.
GRAPHICS		Loads a program that can print graphics.
***HELP**	**5**	**Provides Help information for MS-DOS commands.**
***HELP**	**6**	**Provides complete, interactive Help information for MS-DOS commands.**

IF		Performs conditional processing in batch programs.
INTERLNK	6	Connects two computers via parallel or serial ports.
INTERSVR	6	Starts the Interlnk server.
JOIN	5	Joins a disk drive to a directory on another drive.
KEYB		Configures a keyboard for a specific language.
***LABEL**		**Creates, changes, or deletes the volume label of a disk.**
LH		Loads a program into the upper memory area.
LOADFIX		Loads a program above the first 64K of memory, and runs the program.
LOADHIGH		Loads a program into the upper memory area.
***MD**		**Creates a directory.**
MEM		Displays the amount of used and free memory in your system.
MEMMAKER	6	Starts the Memmaker program, which optimizes your computer's memory.
MIRROR	5	Records information about one or more disks.
MKDIR		Creates a directory.
MODE		Configures a system device.
***MORE**		**Displays output one screen at a time.**
***MOVE**	6	**Moves one or more files. Also renames files and directories.**
MSAV	6	Scans your computer for known viruses.
MSBACKUP	6	Backs up or restores one or more files from one disk to another.
MSD	6	Provides detailed technical information about your computer.
NLSFUNC		Loads country-specific information.
PATH		Displays or sets a search path for executable files.
PAUSE		Suspends processing of a batch file and displays a message.
POWER	6	Turns power management on and off.
PRINT		Prints a text file while you are using other MS-DOS commands.
***PROMPT**		**Changes the MS-DOS command prompt.**
QBASIC		Starts the MS-DOS QBasic programming environment.
***RD**		**Removes a directory.**
RECOVER	5	Recovers readable information from a bad or defective disk.
REM		Records comments (remarks) in batch files or CONFIG.SYS.
***REN**		**Renames a file or files.**
RENAME		Renames a file or files.
REPLACE		Replaces files.
RESTORE		Restores files that were backed up by using the BACKUP command.
RMDIR		Removes a directory.
SET		Displays, sets, or removes MS-DOS environment variables.
SETVER		Sets the version number that MS-DOS reports to a program.
SHARE		Installs file-sharing and locking capabilities on your hard disk.
SHIFT		Shifts the position of replaceable parameters in batch files.
SORT		Sorts input.
SUBST		Associates a path with a drive letter.
SYS		Copies MS-DOS system files and command interpreter to a disk you specify.
***TIME**		**Displays or sets the system time.**
***TREE**		**Graphically displays the directory structure of a drive or path.**
***TYPE**		**Displays the contents of a text file.**
***UNDELETE**		**Recovers files which have been deleted.**
UNFORMAT		Restores a disk erased by the FORMAT command or restructured by the RECOVER command.
***VER**		**Displays the MS-DOS version.**
VERIFY		Tells MS-DOS whether to verify that your files are written correctly to a disk.
***VOL**		**Displays a disk volume label and serial number.**
VSAFE	6	Continuously monitors your computer for viruses.
***XCOPY**		**Copies files (except hidden and system files) and directory trees.**

APPENDIX B – Common DOS Error Messages

Abort, Retry, Fail

This message appears with another message above it that gives more information about the specific problem; for example, **Not ready reading drive X** (see below).

CAUSE: You have given DOS a command involving a disk drive that the computer cannot perform.

SOLUTION:
- Correct the problem, if possible, and press [R] to *retry* or
- press [F] (fail) and then type a drive letter that is working, such as C:, and then press [↵]

Bad command or file name

CAUSE: You either misspelled a command or file name, or DOS could not find the command or file name, that is, it was not in the *current* disk, directory, or search path.

SOLUTION:
- Check the spelling of the command or file name,
- change to the correct directory and try the command again, or
- enter the correct path to the command or file name along with the command or file name.

Directory already exists

CAUSE: You used the MD (make directory) command to create either a directory that already exists or a directory whose name is the same name as a filename in the directory.

SOLUTION:
- Use DIR or TREE to check the names of directories and filenames, and then use a name that is different when you try to create a new directory.

Duplicate file name or file not found

CAUSE: You used REName to rename a file to a filename that already exists, or DOS cannot find the file you want to rename.

SOLUTION:
- Rename the file to an unused filename or
- use the correct name of the file to be renamed.

File not found

CAUSE: Either you misspelled a filename, or DOS could not find the file, that is, the file was not on the disk or in the directory you specified, or in the search path.

SOLUTION:
- Check the filename to be sure it is spelled correctly, or
- check the current directory, or the path to the desired file, or
- see Exercise 34 (Find files) for directions to search all directories for the file you want to find.

General failure reading drive X (where X represents the disk drive you tried to access)
Abort, Retry, Fail

CAUSE: You tried to change to a disk that either is not formatted or is damaged.

SOLUTION:
- Put a formatted disk in the drive and press [R] to retry, or
- press [F] (fail) and then type a drive letter that is working, such as C:, and then press [↵]

Insufficient disk space

CAUSE: You tried to save a file that is bigger than the amount of space remaining on the disk.

SOLUTION:
- Delete unnecessary files from the disk and try to save the file again, or
- save the file on a different disk.

Non-system disk or disk error

CAUSE: You turned the computer on when there was a *non-system* disk in drive A:. If there is a disk in drive A: when you turn the computer on, DOS tries to boot the computer with that disk.

SOLUTION:
- Remove the disk from drive A: and press any key to continue or,
- if you want to boot the computer from drive A:, replace the *non-system* disk with a *system* disk and press any key to continue.

Not ready reading drive X (where X represents the disk drive you tried to access)
Abort, Retry, Fail

CAUSE: You changed to a drive without a disk in it or the disk drive's latch was not closed.

SOLUTION:
- Put a disk in the disk drive, if necessary, and/or close the disk drive's latch, and then press [R] to *retry* or
- press [F] (fail) and then type a drive letter that is working, such as C:, and then press [↵]

Required parameter missing

CAUSE: You left out one of the parameters that the DOS command requires (see Topic 11, page 80).

SOLUTION:
- Use HELP or FASTHELP (or some other reference source) to check the required parameters of the DOS command you are using, and try the command again using the correct parameters. Sometimes a little experimenting will help you find a solution.

Syntax error

CAUSE: Some of your command parts were typed in the wrong order.

SOLUTION:
- Use HELP (DOS 5) or FASTHELP (DOS 6), or some other reference source, to check the correct order of the parts of the DOS command you are using, and try the command again using the correct order.

Unable to create directory

CAUSE: You tried to create a directory with a name that matches a filename in the directory or you used a path in the MD command that is not valid.

SOLUTION:
- Use a different directory name—use DIR to check for filenames that may match the name you want to give your directory and/or
- use the TREE command to check your directory structure and determine the correct path for the directory you want to make.

APPENDIX C – DOS Commands, Categorized

Coded to indicate which of the following categories each command fits into.

5 = DOS 5 **I** = internal command **B** = batch file command
6 = DOS 6 **E** = external command **C** = config.sys command

command	5	6	I	E	B	C
A						
APPEND	5	6		E		
ASSIGN	5			E		
ATTRIB	5	6		E		
B						
BACKUP	5			E		
BREAK	5	6				C
BUFFERS		6				C
C						
CALL	5	6	I		B	
CD	5	6	I			
CHCP	5	6		E		
CHDIR	5		I			
CHKDSK	5	6		E		
CHOICE		6		E	B	
CLS	5	6	I			
COMMAND	5	6		E		
COMP	5	6		E		
COPY	5	6	I			
COUNTRY		6	I			
CTTY	5	6	I			
D						
DATE	5	6	I			
DBLSPACE		6		E		
DEBUG	5	6		E		
DEFRAG		6		E		
DEL	5	6	I			
DELOLDOS		6		E		
DELTREE		6		E		
DEVICE		6				C
DEVICEHIGH		6				C
DIR	5	6	I			
DISKCOMP	5	6		E		
DISKCOPY	5	6		E		
DOS		6				C
DOSKEY	5	6	I			
DOSSHELL	5	6		E		
DRIVPARM		6				C
E						
ECHO	5	6	I		B	
EDIT	5	6		E		
EDLIN	5			E		
EMM386	5	6		E		
ERASE	5	6	I			
EXE2BIN	5			E		
EXIT	5	6	I			
EXPAND	5	6		E		

command	5	6	I	E	B	C
F						
FASTHELP		6		E		
FASTOPEN	5	6		E		
FC	5	6		E		
FCBS		6				C
FDISK	5	6		E		
FILES		6				C
FIND	5	6		E		
FOR	5	6	I		B	
FORMAT	5	6		E		
G						
GOTO	5	6	I		B	
GRAFTABL	5			E		
GRAPHICS	5	6		E		
H						
HELP	5	6		E		
I						
IF	5	6	I		B	
INCLUDE		6				C
INSTALL		6				C
INTERLINK		6		E		
INTERSVR		6		E		
J						
JOIN	5			E		
K						
KEYB	5	6		E		
L						
LABEL	5	6		E		
LASTDRIVE		6				C
LH	5	6	I			
LOADFIX	5	6		E		
LOADHIGH	5	6	I			
M						
MD	5	6	I			
MEM	5	6		E		
MEMMAKER		6		E		
MENUCOLOR		6				C
MENUDEFAULT		6				C
MENUITEM		6				C
MIRROR	5			E		
MKDIR	5		I			
MODE	5	6		E		
MORE	5	6		E		
MOVE		6		E		
MSAV		6	I			
MSBACKUP		6		E		
MSD		6		E		

command	5	6	I	E	B	C
N						
NLSFUNC	5	6		E		
NUMLOCK		6				C
P						
PATH	5	6	I			
PAUSE	5	6	I		B	
POWER		6		E		
PRINT	5	6		E		
PROMPT	5	6	I			
Q						
QBASIC	5	6		E		
R						
RD	5	6	I			
RECOVER	5			E		
REM	5	6			B	C
REN	5	6	I			
RENAME	5		I			
REPLACE	5	6		E		
RESTORE	5	6		E		
RMDIR	5		I			
S						
SET	5	6	I			
SETVER	5	6		E		
SHARE	5	6		E		
SHELL		6				C
SHIFT	5	6			B	
SMARTDVR		6		E		
SORT	5	6		E		
STACKS		6				C
SUBMENU		6				C
SUBST	5	6		E		
SWITCHES		6				C
SYS	5	6		E		
T						
TIME	5	6	I			
TREE	5	6		E		
TRUENAME		6	I			
TYPE	5	6	I			
U						
UNDELETE	5	6		E		
UNFORMAT	5	6		E		
V						
VER	5	6	I			
VERIFY	5	6	I			
VOL	5	6	I			
VSAFE		6		E		
X						
XCOPY	5	6		E		

APPENDIX D – MS-DOS 6.2 Changes

(the changes that affect some exercises in this book)

File overwrite protection

When using the MOVE, COPY, or XCOPY command, DOS 5.0 and 6.0 will overwrite files with the same name as those you are copying or moving; **MS-DOS 6.2** warns you before overwriting files with the same name.

For example, if you try to *copy* a file named JONES.DOC to a directory named LETTERS on a disk in drive A: that already contained a file named JONES.DOC, **MS-DOS 6.2** will display this message:

```
Overwrite A:\LETTERS\JONES.DOC (Yes/No/All)?
```

Commas

While DOS 5.0 and 6.0 do *not* display commas in the output created by the DIR, MEM, CHKDSK, and FORMAT commands, **MS-DOS 6.2** displays commas in all numbers greater than one thousand.

DOS 5.0 and 6.0 DIR output does not use commas

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of A:\PROGRAMS

.            <DIR>      05-22-93   8:41p
..           <DIR>      05-22-93   8:41p
CLS      DAT         290 04-22-93   4:05p
OPENING  DAT         319 04-22-93   4:05p
CD       DAT         479 04-22-93   3:57p
SHOWME   BAT         139 09-22-93   8:08p
DB       EXE       31458 04-22-93   3:21p
SS       EXE       31374 04-22-93   3:06p
WP       EXE       31426 04-22-93   3:10p
DATA         <DIR>      05-22-93   8:43p
       10 file(s)      95485 bytes
                    10193536 bytes free
```

***MS-DOS 6.2** DIR output uses commas*

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of A:\PROGRAMS

.            <DIR>      05-22-93   8:41p
..           <DIR>      05-22-93   8:41p
CLS      DAT         290 04-22-93   4:05p
OPENING  DAT         319 04-22-93   4:05p
CD       DAT         479 04-22-93   3:57p
SHOWME   BAT         139 09-22-93   8:08p
DB       EXE      31,458 04-22-93   3:21p
SS       EXE      31,374 04-22-93   3:06p
WP       EXE      31,426 04-22-93   3:10p
DATA         <DIR>      05-22-93   8:43p
       10 file(s)      95,485 bytes
                    10,193,536 bytes free
```

No-swap DISKCOPY

When using the DISKCOPY command, DOS 5.0 and 6.0 require you to switch the *source* and *target* disks if you are copying a disk with a capacity greater than 360K. But, because **MS-DOS 6.2** uses *hard disk space* when copying floppy disks, it does *not* require multiple disk swaps, even with disks that have capacities greater than 360K.

DOS Shell has been removed

Because so many people use the File Manager program in Windows instead of DOS Shell, Microsoft has removed DOSSHELL from **MS-DOS 6.2** and has placed it on the **MS-DOS 6.2** Supplemental Disk. If you do not have DOSSHELL, you cannot do Lesson Eight in this book.

APPENDIX E – Miscellaneous Exercise Solutions

LESSON TWO

EXERCISE 13 (page 39)
STEP 3

1. \FOOD\VEGGIES
2. \PROGRAMS\DATA
3. \ or A:. or A:\
4. GAMES, FOOD, PROGRAMS, BAK
5. VEGGIES, GOODIES
6. GAMES, FOOD, VEGGIES, GOODIES, PROGRAMS, DATA, BAK

LESSON THREE

EXERCISE 20 (page 59)
STEP 3

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of A:\

GAMES          <DIR>      05-02-93   7:46p
FOOD           <DIR>      05-02-93   7:46p
PROGRAMS       <DIR>      05-22-93   8:41p
JONES    LET           9 05-02-93   7:48p
BAK            <DIR>      05-22-93   8:43p
SMITH    LET           9 05-02-93   8:13p
LOPEZ    LET           9 05-02-93   8:13p
LETTER1                7 05-02-93   8:15p
REPORT3                7 05-02-93   8:16p
LETTER2                7 05-02-93   8:16p
CLUE     GAM           8 05-02-93   8:17p
CORN     VEG           8 05-02-93   8:17p
RADISH   VEG          10 05-02-93   8:17p
POTATOES VEG          12 05-02-93   8:18p
PUDDING  DES          11 05-02-93   8:19p
LOPEZ    RPT           9 05-02-93   8:19p
REPORT1                7 05-02-93   8:20p
SMITH    RPT           9 05-02-93   8:20p
SMITH    MEM           9 05-02-93   8:20p
TRIVIA   GAM          10 05-02-93   8:21p
MEMO3                  5 05-02-93   8:21p
LOPEZ    MEM           9 05-02-93   8:21p
LETTER3                7 05-02-93   8:22p
JONES    MEM           9 05-02-93   8:22p
JONES    RPT           9 05-02-93   8:23p
JELLO    DES           9 05-02-93   8:23p
OLDMAID  GAM          11 05-02-93   8:23p
MEMO1                  5 05-02-93   8:24p
MEMO2                  5 05-02-93   8:24p
REPORT2                7 05-02-93   8:25p
HELLO                 99 05-25-93   9:36p
HURRAH                54 05-02-93   8:40p
NOT                   60 05-25-93   9:37p
JONES    BAK           9 05-02-93   7:48p
CLUE     BAK           8 05-02-93   8:17p
TRIVIA   BAK          10 05-02-93   8:21p
OLDMAID  BAK          11 05-02-93   8:23p
       37 file(s)          468 bytes
                     XXXXXX bytes free
```

LESSON THREE

EXERCISE 25 (page 67)
STEP 6

```
 Volume in drive A is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of A:\

GAMES          <DIR>      05-02-93   7:46p
FOOD           <DIR>      05-02-93   7:46p
PROGRAMS       <DIR>      05-22-93   8:41p
JONES    LET           9 05-02-93   7:48p
BAK            <DIR>      05-22-93   8:43p
SMITH    LET           9 05-02-93   8:13p
LOPEZ    LET           9 05-02-93   8:13p
LETTER1                7 05-02-93   8:15p
REPORT3                7 05-02-93   8:16p
LETTER2                7 05-02-93   8:16p
CLUE     GAM           8 05-02-93   8:17p
CORN     VEG           8 05-02-93   8:17p
RADISH   VEG          10 05-02-93   8:17p
POTATOES VEG          12 05-02-93   8:18p
PUDDING  YUM          11 05-02-93   8:19p
LOPEZ    RPT           9 05-02-93   8:19p
REPORT1                7 05-02-93   8:20p
SMITH    RPT           9 05-02-93   8:20p
SMITH    MEM           9 05-02-93   8:20p
TRIVIA   GAM          10 05-02-93   8:21p
LETTER3                7 05-02-93   8:22p
JONES    MEM           9 05-02-93   8:22p
JONES    RPT           9 05-02-93   8:23p
GEL      YUM           9 05-02-93   8:23p
OLDMAID  GAM          11 05-02-93   8:23p
REPORT2                7 05-02-93   8:25p
HELLO                 99 05-25-93   9:36p
HURRAH                54 05-02-93   8:40p
NOT                   60 05-25-93   9:37p
JONES    BAK           9 05-02-93   7:48p
CLUE     BAK           8 05-02-93   8:17p
TRIVIA   BAK          10 05-02-93   8:21p
OLDMAID  BAK          11 05-02-93   8:23p
       33 file(s)          444 bytes
                     XXXXXX bytes free
```

LESSON FIVE

EXERCISE 44 (page 111)
STEP 3

DOS 6 *and* DOS 5:

- **Type** DIR *.DES ↵

DOS 6 only:

- **Type** MOVE *.DES \FOOD\GOODIES ↵
- **Type** DIR *.DES ↵
- **Type** DIR \FOOD\GOODIES*.DES ↵

DOS 5 only:

- **Type** COPY *.DES \FOOD\GOODIES ↵
- **Type** DIR \FOOD\GOODIES*.DES ↵
- **Type** DEL *.DES ↵
- **Type** DIR *.DES ↵

LESSON FIVE

EXERCISE 44 (page 111)
STEP 4

DOS 6 *and* DOS 5:

- **Type** DIR *.GAM ↵

DOS 6 only:

- **Type** MOVE *.GAM \GAMES ↵
- **Type** DIR *.GAM ↵
- **Type** DIR \GAMES*.GAM ↵

DOS 5 only:

- **Type** COPY *.GAM \GAMES ↵
- **Type** DIR \GAMES*.GAM ↵
- **Type** DEL *.GAM ↵
- **Type** DIR *.GAM ↵

LESSON FIVE

EXERCISE 44 (page 111)
STEP 5

DOS 6 *and* DOS 5:

- **Type** DIR ↵

DOS 6 only:

- **Type** MOVE *.* \PROGRAMS\DATA ↵
- **Type** DIR \PROGRAMS\DATA ↵

DOS 5 only:

- **Type** COPY *.* \PROGRAMS\DATA ↵
- **Type** DIR \PROGRAMS\DATA ↵
- **Type** DEL *.* ↵; Y ↵

DOS 6 *and* DOS 5:

- **Type** DIR ↵

LESSON FIVE

EXERCISE 46 (page 116)
STEP 5

You should be in the DATA directory with this prompt showing: A:\PROGRAMS\DATA
Remember that you do not want to move the REPORTS.DOC file to the REPORTS directory (it will be moved to the WP directory with other .DOC files later).

DOS 6 *and* DOS 5:

- **Type** DIR REPORT?. ↵
  (to list files, except REPORT.DOC, that begin with REPORT).
- **Type** DIR *.RPT ↵
  (to list files that with RPT).

DOS 6 only:

- **Type** MOVE REPORT? REPORTS ↵
  (to MOVE files, except REPORT.DOC, that begin with REPORT to the REPORTS directory).
- **Type** MOVE *.RPT REPORTS ↵
  (to MOVE files that end with RPT to the REPORTS directory).
- **Type** DIR\REPORTS ↵
  (to list files in the REPORTS directory).

DOS 5 only:

- **Type** COPY REPORT? REPORTS ↵
  (to COPY files, except REPORT.DOC, that begin with REPORT to the REPORTS directory).
- **Type** (COPY *.RPT REPORTS) ↵
  (to COPY files that end with .RPT to the REPORTS directory).
- **Type** DIR\REPORTS ↵
  (to list files in the REPORTS directory).
- **Type** DEL REPORT? ↵
  (to DEL files in the DATA directory, except REPORT.DOC, that begin with REPORT).
- **Type** DEL *.RPT ↵
  (to DEL files in the DATA directory that end with .RPT).

DOS 6 *and* DOS 5:

- **Type** DIR\REPORT?. ↵
  (to list the files, except REPORT.DOC, that *begin* with REPORT).
  DOS lists the REPORTS directory, but no files.
- **Type** DIR *.RPT ↵
  (to list the files that *end* with .RPT).
  DOS reports "File not found."

LESSON FIVE

EXERCISE 46 (page 116)
STEP 8, (bullet 7)
(• **Transfer** the files HURRAH and NOT from DATA to MISC)
You should be in the DATA directory with this prompt showing: A:\PROGRAMS\DATA>

Transfer HURRAH to MISC:

DOS 6 only

- **Type** MOVE HURRAH \MISC ↵

DOS 5 only

- **Type** COPY HURRAH \MISC ↵
- **Type** DIR \MISC ↵ (DOS displays HELLO, HURRAH, and NOT toward the end of the list).
- **Type** DEL HURRAH ↵

Transfer NOT to MISC:

DOS 6 only:

- **Type** MOVE NOT \MISC ↵

DOS 5 only:

- **Type** COPY NOT \MISC ↵
- **Type** DIR \MISC ↵ (NOT should be listed).
- **Type** DEL NOT ↵

NOTE: Return to page 116 and continue with the command at the bottom of the page (change to the MISC directory).

APPENDIX F — Solutions to Practice Exercises

LESSON ONE
Practice Exercise 7

1. Varies
2. ----
3. A:↵
4. PROMPT↵
5. PROMPT Your Name↵
6. PROMPT Today's date is $D↵
7. PROMPT (optional) $_ (optional)
8. PROMPT PG↵
9. VER↵
10. CLS↵
11. ----
12. PROMPT Time: $T↵
13. PROMPT PG↵
14. CLS↵
15. C:↵
16. A:↵
17. ----
18. C:↵
19. ----
20. A:↵
21. ----
22. ----
23. ----
24. A:↵
25. ----
26. C:↵
27. ----

LESSON TWO
Practice Exercise 16

1. Turn on the computer
   Access the DOS prompt on the hard disk
   Change to drive A:
   Change to the common prompt:
   PROMPT PG
2. DIR
3. DIR C:\
4. DIR/P
5. DIR/W
6. CD PROGRAMS\DATA or CD\PROGRAMS\DATA
7. DIR
8. DIR/O
9. DIR/O:S
10. DIR *.DOC
11. DIR M*.*
12. CD\
13. TREE
14. CD FOOD\GOODIES or CD\FOOD\GOODIES
15. DIR
16. DIR>PRN
17. Turn the on-line light off on
    the printer
    Press the form feed button
    Turn the on-line light back on
18. CD\
19. ----

LESSON TWO
Practice Exercise 17

1. Turn on the computer
   Access the DOS prompt on the hard disk
   Change to drive A:
   Change to the common prompt:
   PROMPT PG
2. CD FOOD\VEGGIES or CD\FOOD\VEGGIES
3. CD↵
4. DIR
5. DIR>PRN
6. DIR\FOOD\GOODIES
7. DIR\FOOD\GOODIES>PRN
8. Turn the on-line light off on
   the printer
   Press the form feed button
   Turn the on-line light back on
9. CD..
10. CD..
11. DIR BAK or DIR\BAK
12. DIR FOOD or DIR\FOOD
13. CD PROGRAMS or CD\PROGRAMS
14. DIR\BAK
15. DIR\FOOD
16. CD\FOOD
17. TREE
18. CD\
19. DIR C:
20. DIR C:\DOS
21. ----

LESSON THREE
Practice Exercise 28

1. DISKCOPY A: A:/V
2. ----
3. COPY LETTER1 LETTER4
4. COPY *.MEM *.BAK
5. COPY LETTER4 \PROGRAMS\DATA
6. COPY *.VEG \FOOD\VEGGIES
7. COPY *.BAK \BAK
8. COPY *.VEG \BAK*.BAK
9. CD \GAMES
10. COPY *.* \BAK
11. CD\
12. COPY P*.* \BAK
13. DIR \BAK>PRN
14. ----

NOTE: Answers 5, 6, 7, 8, 9, 13 and 14 are also correct without the initial backslash (\) that represents the root directory.

LESSON THREE
Practice Exercise 29

1. ----
2. DEL OLDMAID.GAM
3. DEL *.BAK
4. DEL \GAMES\JEOPARDY.GAM
5. DEL \BAK*.GAM
6. CD \FOOD\GOODIES
7. DEL *.*
8. CD\
9. REN LOPEZ.RPT LOPEZRPT.BAK
10. REN *.GAM *.FUN
11. DOS 6.0 MOVE LOPEZRPT.BAK \BAK
    DOS 5.0 COPY LOPEZRPT.BAK \BAK
    DEL LOPEZRPT.BAK
12. DOS 6.0 MOVE *.FUN \GAMES
    DOS 5.0 COPY *.FUN \GAMES
    DEL *.FUN
13. DOS 6.0 MOVE \GAMES \FUN
14. DOS 6.0 TREE
15. TYPE HURRAH
16. TYPE \PROGRAMS\DB.EXE
17. TYPE \PROGRAMS\SHOWME.BAT
18. TYPE HURRAH>PRN
19. DIR/S>PRN
20. FORMAT A:
21. DISKCOPY A: A:/V
22. ----

NOTE: Answers 4, 5, 11, 12, 13, 16, and 17 are also correct without the initial backslash (\) that represents the root directory.

LESSON FOUR
Practice Exercise 43

1. ----
2. DIR/S/P, Ctrl + C
3. FASTHELP REN (6.0) or HELP REN (5.0)
4. CHKDSK
5. ----
6. Press F3
7. DIR MUSIC.DB /S
8. DIR *.GAM /S
9. F3 >PRN ↵
10. ----
11. Press F1 4 times, type J, press F3
12. ----
13. Press F1 4 times, press Ins, type S, press F3
14. ----
15. Press F1 3 times, press Del, press F3
16. CD\PROGRAMS, SS, CD\
17. DATE ↵ ↵
18. TIME ↵ ↵
19. VOL or VOL A:
20. VOL C:
21. LABEL ↵, DATADISK #3
22. VOL or VOL A:
23. LABEL ↵, LEARNING
24. VOL or VOL A:
25. ----

LESSON FIVE
Practice Exercise 52

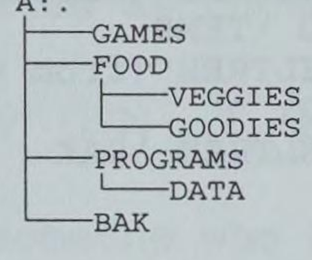
1. ----
2. MD BAK
3. MD TOYS
4. MD NEW
5. RD NEW
6. CD \PROGRAMS\DATA
7. MD SS
8. MD DB
9. MD WP
10. CD\
11. XCOPY \GAMES \TOYS
12. XCOPY \FOOD \BAK /S
13. TREE
14. CD \PROGRAMS\DATA
15. DOS 6 MOVE *.WK SS
    DOS 5 COPY *.WK SS
    DEL *.WK
16. DOS 6 MOVE *.DB DB
    DOS 5 COPY *.DB DB
    DEL *.DB
17. DOS 6 MOVE *.DOC WP
    DOS 5 COPY *.DOC WP
    DEL *.DOC
18. CD\
19. DOS 6 DELTREE \TOYS
    DOS 5 CD\TOYS
    DEL *.*, Y
    CD\
    RD TOYS
20. DOS 6 DELTREE \BAK
    DOS 5 CD\BAK
    DEL *.*, Y
    CD\
    RD BAK
21. TREE
22. DIR/S>PRN
    force printer to eject last page
23. ----

APPENDIX G – Lesson Five Summary

Exercise 44 - empty root directory

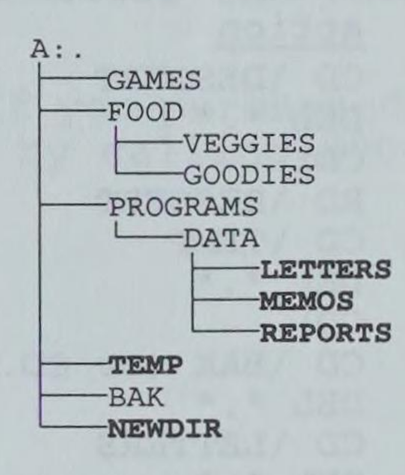
step	action		
2	transfer *.VEG	from root	to \FOOD\VEGGIES
3	transfer *.DES	from root	to \FOOD\GOODIES
4	transfer *.GAM	from root	to \GAMES
5	transfer *.*	from root	to \PROGRAMS\DATA
6	print		

Directory structures at end of exercises



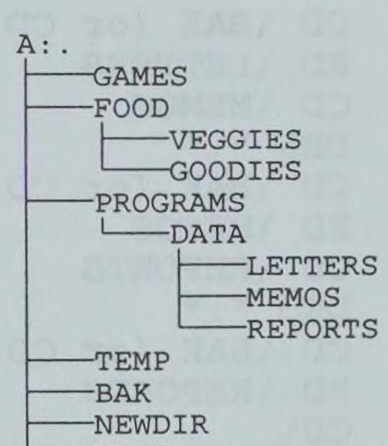
Exercise 45 - MD (make directory)

step	action		
2	MD TEMP	from root	
3	MD NEWDIR	from root	
4	MD LETTERS	from \PROGRAMS\DATA	
4	MD MEMOS	from \PROGRAMS\DATA	
4	MD REPORTS	from \PROGRAMS\DATA	



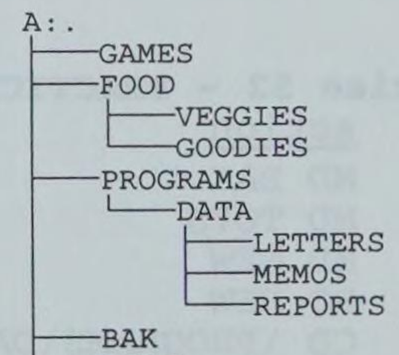
Exercise 46 - Transfer files

step	action		
2	display directory tree		
3	CD \PROGRAMS\DATA		
3	transfer *.LET	from DATA	to LETTERS
3	transfer LETTER?	from DATA	to LETTERS
4	transfer *.MEM	from DATA	to MEMOS
4	transfer MEMO?	from DATA	to MEMOS
5	transfer *.RPT	from DATA	to REPORTS
5	transfer REPORT?	from DATA	to REPORTS
6	CD\		
6	COPY C*.*	from GAMES	to TEMP
7	MD MISC	from root	
8	transfer HELLO	from DATA	to \MISC
8	transfer HURRAH	from DATA	to \MISC
8	transfer NOT	from DATA	to \MISC
9	print		



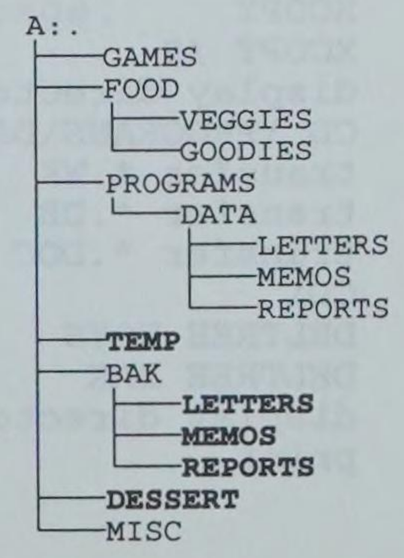
Exercise 47 - RD (remove directory)

step	action	
2	display directory tree	
3	try to remove a directory	
4	RD TEMP	from root
5	RD NEWDIR	from root
6	make a directory, list the directory, change into and out of the directory, and remove the directory	



Exercise 48 - XCOPY

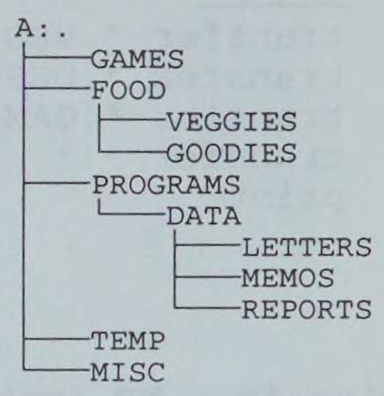
step	action		
2	MD TEMP	from root	
3	XCOPY	from \GAMES	to \TEMP
4	CD \BAK		
4	XCOPY (from within BAK)	from \MISC	to \BAK
4	CD\		
5	XCOPY/S	from \PROGRAMS\DATA	to \BAK
6	XCOPY	from \FOOD\GOODIES	to \DESSERT
7	print tree		



Exercise 49 - DELTREE (DOS 6 ONLY)

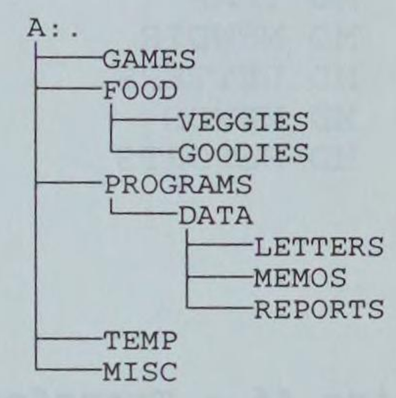
step	action	
2	DELTREE \DESSERT	from root
3	CD \TEMP	
3	DELTREE (from within TEMP)	from \TEMP
3	CD\	
4	DELTREE \BAK	from root

Directory structures at end of exercises



Exercise 50 - Delete directory (DOS 5 ONLY)

step	action	
2	CD \DESSERT	
2	DEL *.*	from DESSERT
2	CD\	
2	RD \DESSERT	
3	CD \TEMP	
3	DEL *.*	from TEMP
3	CD\	
4	CD \BAK (or CD..)	
4	DEL *.*	from BAK
5	CD \LETTERS	
5	DEL *.*	from LETTERS
5	CD \BAK (or CD..)	
5	RD \LETTERS	
6	CD \MEMOS	
6	DEL *.*	from MEMOS
6	CD \BAK (or CD..)	
6	RD \MEMOS	
7	CD \REPORTS	
7	DEL *.*	from REPORTS
7	CD \BAK (or CD..)	
7	RD \REPORTS	
8	CD\	
8	RD \BAK	
9	display directory tree	

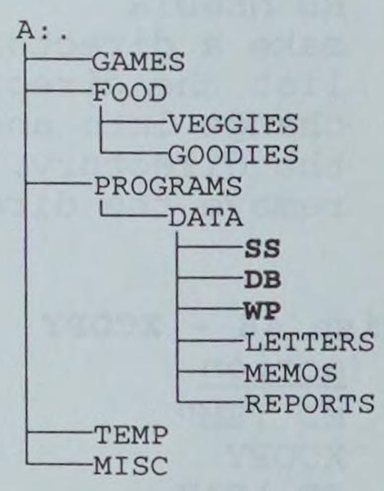


Exercise 51 - Print contents of disk

step	action
2	DIR /S>PRN

Exercise 52 - PRACTICE

step	action		
2	MD BAK	from root	
3	MD TOYS	from root	
4	MD NEW	from root	
5	RD NEW	from root	
6	CD \PROGRAMS\DATA		
7	MD SS	from \PROGRAMS\DATA	
8	MD DB	from \PROGRAMS\DATA	
9	MD WP	from \PROGRAMS\DATA	
10	CD\		
11	XCOPY	from \GAMES	to \TOYS
12	XCOPY /S	from \FOOD	to \BAK
13	display directory tree		
14	CD \PROGRAMS\DATA		
15	transfer *.WK	from \PROGRAMS\DATA	to \PROGRAMS\DATA\SS
16	transfer *.DB	from \PROGRAMS\DATA	to \PROGRAMS\DATA\DB
17	transfer *.DOC	from \PROGRAMS\DATA	to \PROGRAMS\DATA\WP
18	CD\		
19	DELTREE TOYS	from root	
20	DELTREE BAK	from root	
21	display directory tree		
22	print		



APPENDIX H – Make a 5¼" Learning Disk

If your computer system has a 5¼" drive A: and a 3½" drive B:, you can copy the files from the 3½" Learning Disk to a 5¼" disk to make a 5¼" master Learning Disk for drive A:.

- The directories on your new Learning Disk will not have the same dates as those on the original Learning Disk, but that will not affect the exercises.
- You can use either a double density (DD), 360K, or a high density (HD), 1.2MB, 5¼" floppy disk.
- If you feel unqualified to do this procedure, you may want to ask someone who has more DOS experience than you do to perform this procedure.
- If you have two 3½" floppy disk drives, you can use this procedure to make a double density, 720K, floppy disk by substituting a double density 3½" disk for the 5¼" disk in the directions below.
- You do not need to use this procedure to make a 5¼ Learning Disk. If you purchased this book, you can order a free 5¼" Learning Disk from DDC Publishing by calling 800 528-3897.

Directions to make a 5¼" master Learning Disk:

1. Start the computer and access the DOS prompt on drive C:.
   A C prompt should appear on the screen: **C:\>** or **C>**
2. Place the 3½" Learning Disk in drive B:.
3. Place a blank 5¼" formatted disk in drive A: and close the latch.
4. **Type** B: ↵ (to change to drive B:)
   A B prompt should appear on the screen: **B:\>** or **B>**
5. **Type** MD A:\GAMES ↵
6. **Type** MD A:\FOOD ↵
7. **Type** MD A:\FOOD\VEGGIES ↵
8. **Type** MD A:\FOOD\GOODIES ↵
9. **Type** MD A:\PROGRAMS ↵
10. **Type** COPY JONES.LET A:\ ↵
11. **Type** MD A:\BAK ↵
12. **Type** COPY *.* A: ↵
    If you are using DOS 6.2, you will get this warning message:
    Overwrite A:\JONES.LET (Yes/No/All)?
    - **Type** Y ↵
13. **Type** COPY \GAMES*.* A:\GAMES ↵
14. **Type** COPY \FOOD\VEGGIES*.* A:\FOOD\VEGGIES ↵
15. **Type** COPY \FOOD\GOODIES*.* A:\FOOD\GOODIES ↵
16. **Type** COPY \PROGRAMS*.* A:\PROGRAMS ↵
17. **Type** MD A:\PROGRAMS\DATA ↵
18. **Type** COPY \PROGRAMS\DATA*.* A:\PROGRAMS\DATA ↵
19. **Type** A: ↵ (to change to drive A:).
    An A prompt should appear on the screen: **A:\>** or **A>**
20. **Type** LABEL A: ↵
    DOS prompts you for a label:
    Volume label (11 characters, ENTER for none)?
21. **Type** LEARNING ↵
22. **Type** DIR/P ↵
    Check your screen output with the result for step 23 on the next page.
23. **Print the directories and files in the root directory:**
    - Make sure your printer is on and ready to receive data.
    - **Type** DIR>PRN ↵

    If the paper does not eject,
    - Turn the "on-line" light **off** (located on your printer).
    - Press the "form feed" button (located on your printer).
    - Turn the "on-line" light back **on**.

    The paper should be ejected.

24. **Print all the directories and files:**
    - Make sure your printer is on and ready to receive data.
    - **Type** DIR/S>PRN ↵

    At least one paper should be ejected.
    If the last paper does not eject,
    - Turn the "on-line" light **off** (located on your printer).
    - Press the "form feed" button (located on your printer).
    - Turn the "on-line" light back **on**.

25. If you suspect that this procedure did not work, repeat the instructions (be sure to use a blank, formatted disk).

26. Take both disks out of their disk drives, label the new disk "Learning Disk master," and put a write-protect tab on your new 5¼" Learning Disk.

Step 23 result – a list of the root directory

```
 Volume in drive B is LEARNING
 Volume Serial Number is XXXX-XXXX
 Directory of B:\

GAMES        <DIR>     05-02-93   7:46p
FOOD         <DIR>     05-02-93   7:46p
PROGRAMS     <DIR>     05-22-93   8:41p
JONES    LET         9 05-02-93   7:48p
BAK          <DIR>     05-22-93   8:43p
SMITH    LET         9 05-02-93   8:13p
LOPEZ    LET         9 05-02-93   8:13p
LETTER1              7 05-02-93   8:15p
REPORT3              7 05-02-93   8:16p
LETTER2              7 05-02-93   8:16p
CLUE     GAM         8 05-02-93   8:17p
CORN     VEG         8 05-02-93   8:17p
RADISH   VEG        10 05-02-93   8:17p
POTATOES VEG        12 05-02-93   8:18p
PUDDING  DES        11 05-02-93   8:19p
LOPEZ    RPT         9 05-02-93   8:19p
REPORT1              7 05-02-93   8:20p
SMITH    RPT         9 05-02-93   8:20p
SMITH    MEM         9 05-02-93   8:20p
TRIVIA   GAM        10 05-02-93   8:21p
MEMO3                5 05-02-93   8:21p
LOPEZ    MEM         9 05-02-93   8:21p
LETTER3              7 05-02-93   8:22p
JONES    MEM         9 05-02-93   8:22p
JONES    RPT         9 05-02-93   8:23p
JELLO    DES         9 05-02-93   8:23p
OLDMAID  GAM        11 05-02-93   8:23p
MEMO1                5 05-02-93   8:24p
MEMO2                5 05-02-93   8:24p
REPORT2              7 05-02-93   8:25p
HELLO               99 05-25-93   9:36p
HURRAH              54 05-02-93   8:40p
NOT                 60 05-25-93   9:37p
      33 file(s)        430 bytes
                    XXXXXXX bytes free
```

Step 24 result – a list of all the files and directories on the disk

```
 Volume in drive B is LEARNING
 Volume Serial Number is XXXX-XXXX
Directory of B:\

GAMES        <DIR>     05-02-93   7:46p
FOOD         <DIR>     05-02-93   7:46p
PROGRAMS     <DIR>     05-22-93   8:41p
JONES    LET         9 05-02-93   7:48p
BAK          <DIR>     05-22-93   8:43p
SMITH    LET         9 05-02-93   8:13p
LOPEZ    LET         9 05-02-93   8:13p
LETTER1              7 05-02-93   8:15p
REPORT3              7 05-02-93   8:16p
LETTER2              7 05-02-93   8:16p
CLUE     GAM         8 05-02-93   8:17p
CORN     VEG         8 05-02-93   8:17p
RADISH   VEG        10 05-02-93   8:17p
POTATOES VEG        12 05-02-93   8:18p
PUDDING  DES        11 05-02-93   8:19p
LOPEZ    RPT         9 05-02-93   8:19p
REPORT1              7 05-02-93   8:20p
SMITH    RPT         9 05-02-93   8:20p
SMITH    MEM         9 05-02-93   8:20p
TRIVIA   GAM        10 05-02-93   8:21p
MEMO3                5 05-02-93   8:21p
LOPEZ    MEM         9 05-02-93   8:21p
LETTER3              7 05-02-93   8:22p
JONES    MEM         9 05-02-93   8:22p
JONES    RPT         9 05-02-93   8:23p
JELLO    DES         9 05-02-93   8:23p
OLDMAID  GAM        11 05-02-93   8:23p
MEMO1                5 05-02-93   8:24p
MEMO2                5 05-02-93   8:24p
REPORT2              7 05-02-93   8:25p
HELLO               99 05-25-93   9:36p
HURRAH              54 05-02-93   8:40p
NOT                 60 05-25-93   9:37p
      33 file(s)        430 bytes
Directory of B:\BAK

.            <DIR>     05-22-93   8:43p
..           <DIR>     05-22-93   8:43p
       2 file(s)          0 bytes
Directory of B:\FOOD

.            <DIR>     05-02-93   7:46p
..           <DIR>     05-02-93   7:46p
VEGGIES      <DIR>     05-02-93   8:27p
GOODIES      <DIR>     05-02-93   8:28p
       4 file(s)          0 bytes
Directory of B:\FOOD\GOODIES

.            <DIR>     05-02-93   8:28p
..           <DIR>     05-02-93   8:28p
CAKE     DES         8 05-02-93   8:45p
COOKIES  DES        11 05-02-93   8:46p
ICECREAM DES        12 05-02-93   8:46p
PIE      DES         7 05-02-93   8:46p
       6 file(s)         38 bytes
Directory of B:\FOOD\VEGGIES

.            <DIR>     05-02-93   8:27p
..           <DIR>     05-02-93   8:27p
CABBAGE  VEG        11 05-02-93   8:47p
CARROTS  VEG        11 05-02-93   8:47p
KALE     VEG         8 05-02-93   8:47p
LETTUCE  VEG        11 05-02-93   8:47p
CELERY   VEG        10 05-02-93   8:48p
       7 file(s)         51 bytes
Directory of B:\GAMES

.            <DIR>     05-02-93   7:46p
..           <DIR>     05-02-93   7:46p
ASTRO    GAM         9 05-02-93   8:48p
CHESS    GAM         9 05-02-93   8:48p
JEOPARDY GAM        12 05-02-93   8:49p
       5 file(s)         30 bytes
Directory of B:\PROGRAMS

.            <DIR>     05-22-93   8:41p
..           <DIR>     05-22-93   8:41p
CLS      DAT       290 04-22-93   4:05p
OPENING  DAT       319 04-22-93   4:05p
CD       DAT       479 04-22-93   3:57p
SHOWME   BAT       139 04-22-93   3:59p
DB       EXE     31458 04-22-93   3:21p
SS       EXE     31374 04-22-93   3:06p
WP       EXE     31426 04-22-93   3:10p
DATA         <DIR>     05-22-93   8:43p
      10 file(s)     95485 bytes
Directory of B:\PROGRAMS\DATA

.            <DIR>     05-22-93   8:43p
..           <DIR>     05-22-93   8:43p
MEMBER   DB          9 05-25-93   9:28p
CLUB     DB          7 05-25-93   9:29p
MUSIC    DB          8 05-25-93   9:29p
REPORT   DOC        10 05-25-93   9:30p
SCRIPT   DOC        10 05-25-93   9:30p
PAYROLL  WK         10 05-25-93   9:31p
SALES    WK          8 05-25-93   9:31p
AGENDA   DOC        10 05-25-93   9:32p
GRADES   WK          9 05-25-93   9:32p
      11 file(s)         81 bytes
Total files listed:
      78 file(s)     96115 bytes
                   XXXXXXX bytes free
```

APPENDIX I – Rebuild the Group Windows

DO THIS PROCEDURE ONLY IF PROGRAM ICONS ARE MISPLACED OR DELETED FROM THE GROUP WINDOWS. However, it should not cause any problems if you do this procedure (unless you have customized program icons in your group windows and do not want them to change).

If you have done the procedures in Appendix J and/or have correct copies of the .INI and .GRP files, you need not do this procedure. However, if your group windows are missing program icons, this procedure will "rebuild" the group windows and group window files.

1. START WINDOWS
   - Turn the monitor and computer on.
   - If Windows does not appear, **start Windows** (from the **C:\>** prompt, type `WIN`, then press ↵).

2. FROM THE STARTING WINDOWS SCREEN,
   with the Program Manager window's top bar (title bar) highlighted:
   - **Press** Alt + F (File) OR **click** on File.
     The File menu drops down.
   - **Press** R (Run...) OR **click** on Run... .
     The *Run* dialog box appears.
   - **Type:** `setup /p`
   - **Press** ↵ OR **click** on [OK].

3. EXIT WINDOWS
   - **Press** Alt + F4 (shortcut keys to exit a window).
   - **Press** ↵.

APPENDIX J – Reproduce the Original Windows Desktop

The original .INI and .GRP files should be copied on a floppy disk for a back up. In addition, you may want to be able to reproduce the original Windows desktop (starting Windows screen) simply by typing CHANGE at the DOS prompt. Instructions to do both jobs are shown below. The best time to perform these procedures is before any changes are made to your Windows program.

If program icons within the group windows have been deleted, do Appendix B, Rebuild Group Windows, before doing the procedures below.

If you have little or no experience working with DOS (disk operating system), you may prefer to get assistance from someone with expertise in this area.

If the Windows subdirectory on your system is not named WINDOWS, substitute the name of your Windows subdirectory for WINDOWS in the procedures below.

Copy the .INI and .GRP Files on a Floppy Disk for a back up

1. • Turn the monitor and computer on.
   If Windows appears, **press** Alt + F4, then ↵ (to exit Windows).
   The DOS prompt, **C:\>**, appears in the top left corner of the screen.
   • Place a blank, formatted disk in Drive A: or B:. (If you use Drive B:, substitute `b:` for `a:` in step 2 below.)

2. • At the **C:\>** prompt, **type** `cd windows` **press** ↵.
   • At the **C:\WINDOWS>** prompt, **type** `copy *.ini a:` **press** ↵.
   type copy *.grp a: **press** ↵.
   type `cd\` **press** ↵.

Prepare a System to Reproduce the Original "Starting Windows Screen"

1. • Turn the monitor and computer on.
   If Windows appears, **press** Alt + F4, then ↵ (to exit Windows).
   The DOS prompt, **C:\>**, appears in the top left corner of the screen.

2. • At the **C:\>** prompt, **type** `cd windows` **press** ↵.
   • At the **C:\WINDOWS>** prompt, **type** `copy *.ini *.oin` **press** ↵.
   type `copy *.grp *.ogp` **press** ↵.
   type `cd\` **press** ↵.

3. • At the **C:\>** prompt, **type** `copy con change.bat` **press** ↵.
   type `echo off` **press** ↵.
   type `cd windows` **press** ↵.
   type `copy *.oin *.ini` **press** ↵.
   type `copy *.ogp *.grp` **press** ↵.
   (optional) **type** `cls` **press** ↵.
   type `cd\` **press** ↵.
   press Ctrl + Z press ↵.

NOTE: If you make an error, press Ctrl + Z, ↵ *and start step 3 again.*

Reproduce the Original "Starting Windows Screen" Using the CHANGE Batch File

1. • At the **C:\>** prompt, **type** `change` **press** ↵.

NOTE: For more information about .INI and .GRP files, read the SYSINI.WRI and WININI.WRI files. First open Write, then open the files, one at a time. You may need assistance doing this.

APPENDIX K – Common Problems and Solutions

NOTE: Page references in the "Possible solutions" sections below all point you to the next topic, Basic Windows Commands at a Glance.

a window disappears

Possible causes

- As you open new windows, they appear in front of existing windows, partially or completely covering them.
- The "Minimize on Use" setting may be selected. It is located in the Options menu on the Program Manager's menu bar. When checked, this option causes the Program Manager to become an icon when you open another application.
- The window may have been closed.
- You may have moved and sized group windows and the Program Manager window until some windows do not show. If this happens, the Program Manager window will have scroll bars.

Possible solutions

- Select an application window (p. 304).
- Select a group window (p. 304).
- Arrange group windows (p. 303).
- Arrange icons (p. 303).
- Move a window (p. 304).
- Deselect the "Minimize on Use" option:
  - First *select* the Program Manager window (p. 304).
  - Then Press Alt + O (Options).
  - If Minimize on Use is checked, press M; otherwise, press Alt to cancel the menu without making a change.

a window suddenly fills the entire screen

Possible causes

- You may have double-clicked on the window's title bar instead of ▭ (the control box).
- You may have clicked on ▲ (the maximize button).

Possible solution

- Restore the window (p. 304).

a box appears that offers you choices or asks you to do something (a dialog box)

Possible causes

- You may have clicked on a menu on the menu bar and then selected a menu command that opened a *dialog box* (one with an ellipsis (...)).

Possible solutions

- Press Esc.
  OR press Alt + F4.
  OR double-click on ▭ (the control box).
  OR click on [Cancel].
  OR click on [No].

a drop-down menu appears that you do not want

Possible causes

- You clicked on one of the menus on the menu bar.
- You may have pressed Alt + the underlined letter of a menu.

Possible solutions

- Press Alt.

icons become disorganized

Possible causes

- When you tried to click or double-click on icons, they got *dragged* out of their original positions.

Possible solutions

- Arrange icons (p. 303).

a window appears that you do not want open

Possible causes

- You pressed the ↵ key (causing any highlighted program icon or group window icon to open to a window).
- You double-clicked on a program icon or group window icon.

Possible solutions

- Close a group window (p. 303).
- Exit a program (p. 303).

part of the window does not show

Possible causes

- You may have dragged an application window off the screen or dragged a group window beyond the border of the Program Manager window.

Possible solutions

- Arrange group windows (p. 303).
- Move a window (p. 303).
- Size a window (p. 304).

the program manager window is empty or completely jumbled

Possible causes

- You may have moved and sized group windows and the Program Manager window until some windows do not show. If this happens, the Program Manager window will have scroll bars.
- You may have closed all the group windows and sized the Program Manager's borders smaller, thus hiding the group window icons.
- You may have opened many group and/or application windows and moved and resized them.

Possible solutions

- Select the Program Manager (application) window (p. 304).
- Arrange group windows (p. 303).
- Arrange icons (p. 303).
- Close group windows (p. 303).
- Exit a program (p. 303).

a window has changed size

Possible causes

- When the pointer contacts a window border, it becomes a double-headed arrow. If you press the left mouse button and drag the mouse when the pointer is a double-headed arrow, it will move the border in the direction that the mouse is dragged, thus changing the window size.
- You may have clicked on the maximize, minimize, or restore buttons, or double-clicked on a window's title bar.

Possible solutions

- Size a window (p. 304).
- Restore a window (p. 304).

options that should not have a check mark by them

Possible causes

- In the normal course of examining the Windows environment, many people open the Options menu and click on one or more of the menu commands. The following options are best left unchecked until you understand what they do:

  Auto Arrange,
  Minimize on Use, and
  Save Settings on Exit.

Possible solutions

- Click on the Options menu to open it and look at it.
  If an option has a check mark by it, click on that option (to deselect it).
  If no option has a check mark by it, click on Options again to close the menu.
  Repeat the procedure until all check marks are gone.

APPENDIX L – Basic Windows Commands at a Glance

arrange group windows

Cascade: Press Shift + F5 (shortcut key to cascade).
OR Click on Window, then on Cascade.

Tile: Press Shift + F4 (shortcut key to tile).
OR Click on Window, then on Tile.

arrange icons

group window icons: Click once on any group window icon (to highlight its name); and click on Window, then on Arrange Icons.

program-item icons: Click once on any program-item icon (to highlight its name); and click on Window, then on Arrange Icons.

cancel

Click on Cancel.
OR Press Esc.

close a group window

Double-click on the group window's control box.
OR With the desired group window's title bar highlighted, press Ctrl + F4.

exit a program

Double-click on the control box.
OR Click on File, then on Exit.
OR Click on , then on Close.
OR Press Alt + F4.
If a dialog box appears asking if you want to "save current changes," click on No or press N.

exit Windows

Double-click on the control box, then click on OK.
OR Press Alt + F, X (exit), then press Enter.
OR Press Alt + F4, then press Enter.

maximize a window

Application window:
Double-click on the window's title bar.
OR Click on the maximize button.
OR Press Alt + Space (spacebar), then press X (Maximize).

Group (or Document) window:
Double-click on the window's title bar.
OR Click on the group window's maximize button.
OR Press Alt + - (hyphen), then press X (Maximize).

minimize a window

Application window:
Click on the top minimize button.
OR Press Alt + Space (spacebar), then press N (Minimize).

Document (or Group) window:
Click on the group window's minimize button.
OR Press Alt + - (hyphen), then press N (Minimize).

move a window

Position the pointer on the title bar, and drag it to the desired location.

move icons

Position the cursor on the desired icon, and drag it to the desired location.

open a group window

Double-click on the group window icon.
OR Click on the group window icon, then click on Restore.
OR Press Ctrl + Tab until the group window name is highlighted, and then press ↵.

restore a window (that has been maximized — it has ⇕ in top right corner)

Application window:
Double-click on the window's title bar.
OR Click on ⇕ (the top restore button).
OR Press Alt + Space (spacebar), then press R (Restore).

Document (or Group) window:
Click on ⇕ (the group window's restore button).
OR Press Alt + - (hyphen), then press R (Restore).

scroll through a window

When scroll bars appear:
Drag the scroll box within the scroll bar.
OR Click on the scroll arrow in the direction you want to scroll.
OR Click just before the scroll arrow in the direction you want to scroll.

select a group window (it will display a highlighted title bar)

Use menu bar:	Click on Window, then on the desired group window name.
Click-on method:	Click on any visible part of the desired window.
Rotate method:	Hold down Ctrl while you tap Tab until the desired group window appears, then release both keys.

select an application window (it will display a highlighted title bar)

Click-on method:	Click on any part of the window that is visible.
Rotate method:	Hold down Alt while you tap Tab until the desired window appears, then release both keys.
Task List method:	Double-click on the desktop, then on the desired window's title. OR Press Ctrl + Esc, use arrows to highlight the desired window, and then press ↵.

size a window

Position the pointer on any of the window borders or corners (it turns into a double-headed arrow), and drag the border or corner to the desired size.

start a program

Double-click on the program-item icon.
OR With the desired group window open and its title bar highlighted, use the arrow keys to highlight the program-item icon, and then press ↵.

start Windows

Type W I N at the DOS prompt, C:\, then press ↵.

use the menu bar

Click on the desired menu, then on the desired drop-down menu command.
OR Press Alt + [*the underlined letter of the desired menu*], then press the underlined letter of the desired command.

APPENDIX M – Worksheet Solutions for DOS

Worksheet solutions are all on back-to-back pages so that they can be removed from the book (for classroom use) without losing any of the other appendixes.

LESSON ONE — Getting Started

Worksheet 1

Answers

1. monitor
2. keyboard
3. software
4. printer
5. disk drive
6. read-only memory (ROM)
7. hard disk
8. floppy disk
9. system software
10. application software (program)
11. firmware
12. hardware
13. DOS
14. processor
15. computer
16. memory
17. mouse

Missed	Score
0	100
1	94
2	89
3	83
4	77
5	71
6	65
7	59
8	53
9	48
10	42
11	36
12	30
13	24
14	18
15	12
16	6
17	0

Worksheet 2

Answers

1. internal DOS commands
2. DOS prompt
3. disks
4. external DOS commands
5. you (user)
6. program
7. disk density
8. DOS
9. bytes
10. hardware
11. disk capacity
12. DOS command
13. disk and directory structure
14. booting

Missed	Score
0	100
1	93
2	86
3	79
4	72
5	65
6	58
7	51
8	44
9	37
10	30
11	23
12	16
13	9
14	0

Worksheet 3

Answers

1. filename extension
2. directory
3. ASCII file
4. path
5. hard disk drive
6. disk drives
7. floppy disk drive
8. subdirectory
9. file
10. root directory
11. directory structure
12. current directory
13. program file
14. filename
15. data file

Missed	Score
0	100
1	94
2	87
3	80
4	74
5	67
6	61
7	54
8	47
9	40
10	34
11	27
12	20
13	14
14	8
15	0

Worksheet 4

Answers

1. disk capacity
2. Access the DOS prompt
3. floppy disk
4. DOS prompt
5. floppy disk size
6. active drive
7. disk density
8. Changing drives
9. hard disk
10. active DOS prompt
11. Disk drives
12. write-protect tab
13. write-protect

Missed	Score
0	100
1	93
2	85
3	77
4	70
5	62
6	55
7	47
8	40
9	32
10	24
11	17
12	9
13	0

Worksheet 5

Answers

1. VER (version)
2. minor version change
3. version
4. major version change
5. CLS (clear screen)
6. error message
7. current drive
8. path
9. PROMPT
10. default prompt
11. the most common prompt

Missed	Score
0	100
1	91
2	82
3	73
4	61
5	55
6	46
7	37
8	28
9	19
10	10
11	0

Worksheet 6

Answers

1. answers will vary
2. answers will vary
3. answers will vary
4. answers will vary
5. $G
6. $P
7. $D
8. $T
9. $_
10. write-protect the disk
11. uncover the hole in the write-protect slot
12. cover the write-enable notch
13. A:
14. PROMPT HELLO
15. PROMPT TODAY IS $D
16. PROMPT
17. PROMPT PG
18. CLS
19. VER
20. C:

Missed	Score
0	100
1	95
2	90
3	85
4	80
5	75
6	70
7	65
8	60
9	55
10	50
11	45
12	40
13	35
14	30
15	25
16	20
17	15
18	10
19	5
20	0

LESSON TWO — Exploring Directories

Worksheet 7
Answers

1. DIR (directory)
2. DIR and wildcards
3. DIR and switches with options
4. wildcards
5. switch
6. output
7. switch option
8. Redirect output to the printer
9. PRN
10. scrolling
11. redirect
12. directory
13. DIR and switches

Missed	Score
0	100
1	93
2	85
3	77
4	70
5	62
6	55
7	47
8	40
9	32
10	24
11	17
12	9
13	0

Worksheet 8
Answers

1. TREE
2. More DIR
3. subdirectory
4. path
5. directory
6. parent directory
7. root directory
8. CD (change directory)
9. directory branch
10. directory levels
11. directory structure
12. current directory
13. MORE
14. pipe character (|)

Missed	Score
0	100
1	93
2	86
3	79
4	72
5	65
6	58
7	51
8	44
9	37
10	30
11	23
12	16
13	9
14	0

Worksheet 9
Answers

1. DIR
2. switch
3. TREE
4. CD
5. DIR
6. DIR DATA
7. DIR/P
8. DIR/W
9. DIR/O
10. DIR/O:-D
11. DIR M*.*
12. DIR *.DOC
13. DIR L*.TXT
14. DIR>PRN
15. DIR S*.*>PRN
16. TREE
17. TREE FOOD
18. CD GOODIES
19. CD..
20. CD\

Missed	Score
0	100
1	95
2	90
3	85
4	80
5	75
6	70
7	65
8	60
9	55
10	50
11	45
12	40
13	35
14	30
15	25
16	20
17	15
18	10
19	5
20	0

Worksheet 10
Answers

1. CD \GAMES
2. CD \FOOD\GOODIES
3. CD DATA\WP
4. CD \PROGRAMS\DATA\SS
5. CD \FOOD\GOODIES
6. DIR GOODIES
7. DIR \GAMES
8. DIR DATA\SS
9. DIR C:
10. DIR C:\
11. DIR C:\DOS

Missed	Score
0	100
1	91
2	82
3	73
4	61
5	55
6	46
7	37
8	28
9	19
10	10
11	0

LESSON THREE — Frequently Used DOS Commands

Worksheet 11
Answers

1. wildcards
2. filename pattern
3. COPY
4. COPY files to different directories
5. COPY a file to the same directory
6. COPY a group of files to the same directory
7. write-protect tab
8. overwrite a file
9. source disk
10. write-protect
11. target disk
12. verify switch (/v)
13. DISKCOPY

Missed	Score
0	100
1	93
2	85
3	77
4	70
5	62
6	55
7	47
8	40
9	32
10	24
11	17
12	9
13	0

Worksheet 12
Answers

1. FORMAT
2. TYPE
3. UNDELETE
4. REN (rename)
5. program file
6. batch file
7. ASCII file
8. DEL (delete)
9. MOVE

Missed	Score
0	100
1	89
2	78
3	67
4	56
5	45
6	34
7	23
8	12
9	0

Worksheet 13
Answers

1. no
2. yes
3. write-protect the disk
4. cover the write-enable notch
5. uncover the hole in the write-protect slot
6. verify switch or /v
7. DIR
8. overwrite a file
9. /F:size switch
10. DISKCOPY A: A:/V
11. COPY COOKIES.DES COOKIES.FUN
12. COPY *.LET *.BAK
13. COPY COOKIES.DES \FOOD\GOODIES
14. COPY *.MEM \PROGRAMS\DATA
15. COPY *.MEM \BAK*.BAK
16. COPY RADISH.VEG \FOOD\VEGGIES\RADISH.RAD
17. COPY *.* \BAK

NOTE: Answers 13-17 are also correct without the initial backslash (\) that represents the root directory.

Missed	Score
0	100
1	94
2	89
3	83
4	77
5	71
6	65
7	59
8	53
9	48
10	42
11	36
12	30
13	24
14	18
15	12
16	6
17	0

Worksheet 14
Answers

1. DEL CABBAGE.VEG
2. DEL *.RPT
3. DEL *.*
4. DEL\FOOD\VEGGIES\CARROTS.VEG
5. UNDELETE JONES.LET
6. UNDELETE *.BAK
7. REN SMITH.LET SMITHLET.BAK
8. REN *.RPT *.REP
9. MOVE FRUIT.DES \FOOD\GOODIES (DOS 6)
10. MOVE M*.* \BAK (DOS 6)
11. MOVE \BAK \BAKUP (DOS 6)
12. TYPE HELLO
13. TYPE CHANGE.BAT
14. TYPE \PROGRAMS\SS.EXE
15. TYPE C:\AUTOEXEC.BAT
16. FORMAT A:/F:360
17. FORMAT A:/F:720
18. FORMAT A:

Missed	Score
0	100
1	95
2	89
3	84
4	78
5	73
6	67
7	62
8	56
9	50
10	45
11	39
12	34
13	28
14	23
15	17
16	11
17	6
18	0

NOTE: Answers 4, 9, 10, 11, and 14 are also correct without the initial backslash (\) that represents the root directory. However, answer 15 should have the root (\) directory backslash in case the hard disk happens to have a directory other than the root directory current .

LESSON FOUR — Other Useful DOS Commands

Worksheet 15
Answers

1. HELP (5.0 only)
2. FASTHELP (6.0 only)
3. command name
4. parameter
5. switch
6. DOS command
7. CHKDSK
8. Find files
9. destination parameter
10. subdirectory switch (/S)
11. command parts
12. source parameter
13. three main command parts
14. four small command parts
15. HELP (6.0 only)
16. hidden files
17. bad sectors

Missed	Score
0	100
1	94
2	89
3	83
4	77
5	71
6	65
7	59
8	53
9	48
10	42
11	36
12	30
13	24
14	18
15	12
16	6
17	0

Worksheet 16
Answers

1. time parameters
2. VOL (volume)
3. Correct a command
4. DATE
5. date parameters
6. serial number
7. volume
8. LABEL
9. Cancel a command
10. Repeat a command
11. volume label
12. TIME
13. batch file
14. program
15. Run a program

Missed	Score
0	100
1	94
2	87
3	80
4	74
5	67
6	61
7	54
8	47
9	40
10	34
11	27
12	20
13	14
14	8
15	0

Worksheet 17
Answers

1. any order:
   1) command name
   2) parameters
   3) switches
2. parameters
3. command name
4. switches
5. switches
6. parameters
7. command name
8. any order:
   1) space
   2) slash or /
   3) backslash or \
   4) colon or :
9. backslash or \
10. colon or :
11. space
12. backslash or \
13. slash or /
14. colon or :
15. backslash or \
16. destination parameter
17. source parameter

Missed	Score
0	100
1	96
2	91
3	87
4	82
5	78
6	73
7	69
8	64
9	60
10	55
11	50
12	46
13	41
14	37
15	32
16	28
17	23
18	19
19	14
20	10
21	5
22	0

Worksheet 18
Answers

1. FASTHELP (6.0) or HELP (5.0)
2. CHKDSK
3. Press CTRL + C
4. /S (subdirectory)
5. F3
6. F1
7. FASTHELP (6.0) or HELP (5.0)
8. FASTHELP COPY (6.0) or HELP COPY (5.0)
9. CHKDSK A:
10. DIR MEMBER.DB /S
11. DIR *.EXE /S
12. CTRL + C
13. F3
14. F1
15. DATE enter, enter
16. DATE enter, 8-5-98 enter
17. TIME enter, enter
18. TIME enter, 11:15A enter
19. VOL
20. VOL C:
21. LABEL MYDISK
22. FUN
23. PROGS\CHANGE

Missed	Score
0	100
1	96
2	92
3	87
4	83
5	79
6	74
7	70
8	66
9	61
10	57
11	53
12	48
13	44
14	40
15	35
16	31
17	27
18	22
19	18
20	13
21	9
22	5
23	0

LESSON FIVE — Organizing Files

Worksheet 19

Answers

1. directory
2. directory level
3. directory structure
4. XCOPY
5. Print contents of disk
6. directory branch
7. filename
8. RD (remove directory)
9. transfer files
10. organize files
11. filename extension
12. DELTREE (DOS 6) or
    delete directory (DOS 5)

Missed	Score
0	100
1	92
2	84
3	76
4	68
5	60
6	52
7	44
8	36
9	28
10	20
11	12
12	0

Worksheet 20

Answers

1. 1) use a file naming
      system
   2) use a directory system
2. extension
3. because of its large
   capacity
4. MOVE
5. COPY, DEL
6. XCOPY
7. MD (make directory)
8. RD (remove directory)
9. DELTREE
10. empty the directory;
    change out of the
    directory;
    use RD to remove the
    directory
11. MD LETTERS
12. COPY *.DOC LETTERS
13. DEL *.DOC
14. RD TEMP
15. DOS 6 MOVE *.DB DBASE
    DOS 5 COPY *.DB DBASE, DEL *.DB
16. XCOPY MISC TEMP
17. XCOPY PROGRAMS BAK /S
18. DOS 6 DELTREE MISC
    DOS 5
    a) CD\MISC
    b) DEL *.*
    c) CD\
    d) RD\MISC
19. DOS 6 DELTREE FOOD /S
    DOS 5
    a) change to the lowest level directory
    b) delete all the files
    c) change to the parent directory
    d) remove the directory
    e) repeat steps a-d until the directory
       branch is deleted

Missed	Score
0	100
1	95
2	90
3	85
4	80
5	75
6	70
7	65
8	60
9	55
10	50
11	45
12	40
13	35
14	30
15	25
16	20
17	15
18	10
19	5
20	0

APPENDIX N – Worksheet Solutions for Windows

Worksheet solutions are all on back-to-back pages so that they can be removed from the book (for classroom use) without losing any of the other appendixes.

LESSON ONE — Getting Started

Worksheet 1

Answers

1. monitor
2. floppy disks
3. printer
4. computer
5. floppy disk drive
6. hard disk
7. chips
8. memory
9. processor
10. mouse
11. keyboard

Missed	Score
0	100
1	91
2	82
3	73
4	61
5	55
6	46
7	37
8	28
9	19
10	10
11	0

Worksheet 2

Answers

1. computer
2. chips
3. hardware
4. mouse
5. hard disk
6. memory
7. printer
8. disk drive
9. floppy disks
10. processor
11. monitor
12. keyboard

Missed	Score
0	100
1	92
2	84
3	76
4	68
5	60
6	52
7	44
8	36
9	28
10	20
11	12
12	0

Worksheet 3

Answers

1. application software
2. system software
3. floppy disks
4. hard disk
5. firmware
6. memory
7. processor

Missed	Score
0	100
1	86
2	72
3	58
4	44
5	30
6	16
7	0

Worksheet 4

Answers

1. software
2. in any order:
   a. system software
   b. application software
3. in any order:
   a. firmware
   b. DOS - disk operating system
4. system software
5. firmware
6. DOS - disk operating system
7. application software
8. Microsoft Windows
9. program

Missed	Score
0	100
1	89
2	78
3	67
4	56
5	45
6	34
7	23
8	12
9	0

Worksheet 5

Answers

1. GUI - graphical user interface
2. Program Manager
3. multitasking
4. OLE - object linking and embedding
5. icons
6. windows
7. application
8. document
9. desktop

Missed	Score
0	100
1	89
2	78
3	67
4	56
5	45
6	34
7	23
8	12
9	0

Worksheet 6

Answers

1. title bar
2. control box
3. menu bar
4. minimize button
5. maximize button
6. restore button
7. workspace
8. window borders and corners
9. pointer
10. scroll bar

Missed	Score
0	100
1	90
2	80
3	70
4	60
5	50
6	40
7	30
8	20
9	10
10	0

Worksheet 7

Answers

1. control box
2. pointer
3. title bar
4. scroll bars
5. menu bar
6. maximize button
7. minimize button
8. window borders and corners
9. restore button
10. workspace

Missed	Score
0	100
1	90
2	80
3	70
4	60
5	50
6	40
7	30
8	20
9	10
10	0

Worksheet 8

Answers

1. Program Manager
2. in any order:
   a. accessories
   b. applications
   c. main
   d. startup
   e. games
3. commands
4. mouse
5. menu bar
6. drop-down menu
7. dialog box
8. control box
9. command button
10. program icon
11. dimmed command
12. default

Missed	Score
0	100
1	94
2	88
3	82
4	75
5	69
6	63
7	57
8	50
9	44
10	38
11	32
12	25
13	19
14	13
15	7
16	0

Worksheet 9

Answers

1. mouse
2. click
3. double-click
4. drag
5. pointer
6. keyboard
7. in any order:
   a. function keys
   b. control keys
8. Alt, Shift, Ctrl
9. shortcut keys
10. plus (+)
11. comma (,)
12. ESC
13. F1

Missed	Score
0	100
1	93
2	85
3	77
4	70
5	62
6	55
7	47
8	40
9	32
10	24
11	17
12	9
13	0

Worksheet 10

Answers

1. drop-down list box
2. drop-down list arrow
3. command with an ellipsis
4. check box
5. option buttons
6. command buttons
7. increment box

Missed	Score
0	100
1	86
2	72
3	58
4	44
5	30
6	16
7	0

Worksheet 11

Answers

1. option buttons
2. dialog box
3. check boxes
4. command button
5. text box
6. drop-down list box
7. list box
8. drop-down list arrow
9. increment box

Missed	Score
0	100
1	89
2	78
3	67
4	56
5	45
6	34
7	23
8	12
9	0

Worksheet 12

Answers

1. F1
2. Help
3. Glossary
4. Contents
5. About (application)
6. Search for Help On
7. How to Use Help

Missed	Score
0	100
1	86
2	72
3	58
4	44
5	30
6	16
7	0

Worksheet 13

Answers

1. directory window
2. File Manager
3. root directory
4. directory
5. subdirectory
6. current directory
7. directory tree
8. directory window
9. filename extension
10. file
11. associated file
12. program file
13. data file
14. filename

Missed	Score
0	100
1	93
2	86
3	79
4	72
5	65
6	58
7	51
8	44
9	37
10	30
11	23
12	16
13	9
14	0

Worksheet 14

Answers

1. 1,000
2. extended memory
3. memory
4. 386 enhanced mode
5. 1
6. microprocessor chip
7. conventional memory
8. in any order:
   a. multitasking
   b. complex programs
   c. graphics environment
9. 1,000,000
10. standard mode
11. multitasking
12. memory managing
13. 386 enhanced mode

Missed	Score
0	100
1	93
2	85
3	77
4	70
5	62
6	55
7	47
8	40
9	32
10	24
11	17
12	9
13	0

Worksheet 15

Answers

1. CUA - common user access
2. integration
3. OLE - object linking and embedding
4. link
5. embed
6. integration
7. object
8. source document
9. clipboard
10. destination document
11. client application
12. server application

Missed	Score
0	100
1	92
2	84
3	76
4	68
5	60
6	52
7	44
8	36
9	28
10	20
11	12
12	0

LESSON TWO — Windows Basics

Worksheet 16

Answers

1. desktop
2. icon
3. window
4. control box
5. control menu
6. title bar
7. double-click
8. dialog box
9. click
10. group window icons
11. group windows

Missed	Score
0	100
1	91
2	82
3	73
4	61
5	55
6	46
7	37
8	28
9	19
10	10
11	0

Worksheet 17

Answers

1. program icon
2. click off
3. workspace
4. application window
5. active window
6. group window
7. menu bar
8. document window
9. close a menu
10. choose
11. select
12. an ellipsis
13. drag

Missed	Score
0	100
1	93
2	85
3	77
4	70
5	62
6	55
7	47
8	40
9	32
10	24
11	17
12	9
13	0

Worksheet 18

Answers

1. double-headed arrow
2. shortcut keys
3. restore button
4. scroll bar
5. scroll arrow
6. dimmed command
7. maximize button
8. scroll box
9. cascade
10. minimize button
11. tile

Missed	Score
0	100
1	91
2	82
3	73
4	61
5	55
6	46
7	37
8	28
9	19
10	10
11	0

Worksheet 19

Answers

1. open a group window
2. exit Windows
3. start Windows
4. exit a program
5. start a program
6. close a group window
7. select an application window
8. cancel
9. use the menu bar
10. select a group window

Missed	Score
0	100
1	90
2	80
3	70
4	60
5	50
6	40
7	30
8	20
9	10
10	0

Worksheet 20

Answers

1. minimize a window
2. maximize a window
3. restore a window
4. scroll through a window
5. size a window
6. move a window
7. arrange group windows
8. arrange icons
9. move icons

Missed	Score
0	100
1	89
2	78
3	67
4	56
5	45
6	34
7	23
8	12
9	0

LESSON THREE — Beyond Basics

Worksheet 21

Answers

1. clipboard
2. deselect
3. select
4. capture (noun)
5. capture (verb)
6. startup group window
7. Clipboard Viewer
8. option buttons
9. paste
10. text box
11. program items
12. group windows

Missed	Score
0	100
1	92
2	84
3	76
4	68
5	60
6	52
7	44
8	36
9	28
10	20
11	12
12	0

Worksheet 22

Answers

1. capture an application window
2. delete a group window
3. create "Starting Windows Screen"
4. save desktop arrangement
5. print a capture
6. use the Clipboard Viewer
7. capture the screen
8. create a program item
9. move a program item
10. create a group window
11. copy a program item
12. use the startup group
13. delete a program item

Missed	Score
0	100
1	93
2	85
3	77
4	70
5	62
6	55
7	47
8	40
9	32
10	24
11	17
12	9
13	0

LESSON FOUR — File Manager

Worksheet 23

Answers

1. expand directories
2. subdirectories
3. directory levels
4. file
5. collapse directories
6. associated file
7. data file
8. root directory
9. application (program) file
10. directory path
11. file type
12. directory branch

Missed	Score
0	100
1	92
2	84
3	76
4	68
5	60
6	52
7	44
8	36
9	28
10	20
11	12
12	0

Worksheet 24

Answers

1. select a directory
2. select files
3. copy files
4. deselect files
5. create a directory
6. start File Manager
7. sort files
8. expand and collapse directories
9. move files
10. delete files
11. view File Manager menus
12. view specific files
13. view file details
14. change the disk drive
15. format a disk

Missed	Score
0	100
1	94
2	87
3	80
4	74
5	67
6	61
7	54
8	47
9	40
10	34
11	27
12	20
13	14
14	8
15	0

Worksheet 25

Answers

1. edit a linked object
2. source document
3. link an object
4. object
5. edit an embedded object
6. embed
7. link
8. destination document
9. integrate text
10. clipboard

Missed	Score
0	100
1	90
2	80
3	70
4	60
5	50
6	40
7	30
8	20
9	10
10	0

LESSON FIVE — Other Features

Worksheet 26

Answers

1. New
2. end mark
3. Save As...
4. I-beam
5. file
6. insertion point
7. page-status area
8. Save
9. drop-down list box
10. Write

Missed	Score
0	100
1	90
2	80
3	70
4	60
5	50
6	40
7	30
8	20
9	10
10	0

GLOSSARY

.DAT files A *text file* that commonly contains information that is displayed by using a command in a *batch file*.

386 enhanced mode The mode Windows automatically runs in if you have a 386 (or higher) processor with 640K of conventional memory plus at least 1 Mb of extended memory. *See also* standard mode.

A

About (application) A Help feature that displays a window with information about the program you are using.

access the DOS prompt To turn on the computer and display the *DOS prompt* on the *hard disk*.

active window The window whose *title bar is highlighted*, indicating that it is currently *selected*.

active DOS prompt The last DOS prompt on your screen. DOS leaves the commands you have entered on the screen so that you can see the results of previous commands.

active drive The drive you are currently using. Also called *current* drive.

analog clock The Windows clock mode that displays a circular clock with moving hour and minute hands and, if you choose, a second hand. *See also* digital clock.

application file A file that holds a *set of instructions* that perform a task, such as word processing or database management. Program files usually contain one of the following extensions: .EXE, .PIF, .COM, or .BAT.

application software (programs) Software that does a specific task, such as word processing.

application window A window that holds a program. An application window may hold multiple *document* windows, but it may not hold other *application* windows.

arrow pointer The mouse-pointer shape that appears when you start Windows. It is used to choose items, move windows, and activate applications.

ASCII (American Standard Code for Information Interchange) Files saved in ASCII format contain only text and are free of any formatting codes (such as underlines). These "text" files often use a .TXT *filename extension*. *See* unformatted text files.

associated file A file that has a *filename extension* that identifies it as "belonging" to a certain application, such as a Write (.WRI) or a Paintbrush (.BMP) file.

AUTOEXEC.BAT An important batch file that DOS looks for and executes when you turn the computer on. AUTOEXEC.BAT contains commands that set up your work environment the way you want it.

automating DOS To use batch files to execute groups of commands—especially to use the AUTOEXEC.BAT file.

B

back A Help feature that returns you to the previous Help screen, retracing your steps each time you choose *back* again.

background color or pattern The color or pattern used to cover the *drawing area* in Paintbrush before you create a drawing.

bad sectors Areas on a disk that DOS marks as unusable when the disk is formatted. A few *bad sectors* do not necessarily make the entire disk unusable. However, a disk with *bad sectors* should not be used as a *target* disk when copying a disk with the DISKCOPY command. *See* DISKCOPY.

batch file A text file that contains a list of DOS commands that DOS carries out as a set when you run it. Batch files are given a .BAT filename extension when they are created.

block A section of *selected* text in DOS Editor.

booting To begin the computer's start-up process, and load DOS into the computer's memory.

branch *See* directory branch.

GLOSSARY

buffer A temporary storage area where text that is *cut* or *copied* is stored, ready to be *pasted* back into a text file. The buffer stores only the last piece of information that is *cut* or *copied*. *Pasting* information from the buffer does not remove it from the buffer.

bytes A *byte* is a unit of measurement. One *byte* is the amount of space needed to hold one character. The size of many computer parts are measured in *bytes*.

C

Calculator Windows' Calculator, which has two modes: Standard and Scientific. The Standard Calculator lets you do simple calculations, while the Scientific Calculator lets you do advanced scientific and statistical calculations.

Calendar Window's Calendar, which provides a month-at-a-glance calendar, a daily appointment book, and an alarm clock.

cancel a command To use Ctrl+C stop DOS from completing a command.

cancel To escape (or back out of) a menu or dialog box without completing a command.

capture *(noun)* The *image* of an *application window* or the *entire screen* that has been copied onto the clipboard.

capture *(verb)* To *perform the keystrokes to copy* the image that is visible on your monitor (either an application window or the entire screen) onto the clipboard.

cascade To layer and resize the open group windows within the Program Manager workspace so that the title bar of each group window is visible.

case sensitive A search requirement that looks for an *exact* match of the uppercase and lowercase text that you type.

CD (change directory) The DOS command that changes directories or displays the *current* directory.

change drives To make a different disk drive active. *Changing drives* is also referred to as "logging on" to a drive.

check boxes ☐ Squares in a dialog box that you may select as desired. *Selected check boxes* contain an ☒.

chips Small pieces of silicon wafers that often hold instructions to perform behind-the-scenes tasks, making it possible for you to use the computer. The *processor* and *memory* are especially important chips in the computer system.

CHKDSK (check disk) The DOS command that gives you information about your disk and your computer's memory.

choose To pick an item from a menu that initiates an action. (Contrast with *select*.)

click A mouse action in which you move the pointer on an item, and then quickly press and release a mouse button, usually the *left* button.

click off A mouse action in which you click *outside* of an area in order to "back out" of an action.

client application An application whose documents can *accept* embedded or linked objects. *See also* server application.

clipboard A temporary storage area in the computer's memory used to hold information that is being cut (or copied) and pasted. Using the clipboard, data can be transferred from place to place within a document, from document to document, or from one program to another program (in some cases).

Clipboard Viewer A program that lets you *view* the contents of the clipboard. You can also *save* or *delete* the contents of the clipboard, or *open* a previously saved clipboard image.

CLS (clear screen) The DOS command that removes all the information from the screen and display a new *DOS prompt* at the top of the screen.

collapse directories To hide directory levels in File Manager.

color scheme A combination of colors used for Windows screen elements.

command, cancel a *See* cancel a command.
command, correct a *See* correct a command.
command, dimmed *See* dimmed command.
command, DOS *See* DOS command.

command, external DOS *See* external DOS command.
command, internal *See* internal DOS commands.

command button A small box holding an icon or a word that will carry out a command, for example, [OK] or [Cancel]. Command buttons are usually found in dialog boxes.

command name The DOS command; it states the action you want DOS to carry out.

command parts The parts that make up DOS commands; command name, parameters, switches, spaces, slashes, backslashes, and colons.

command, repeat a *See* repeat a command.

COMMAND.COM The *system file* that contains DOS's *internal commands*. DOS puts COMMAND.COM on a *system disk* when you use the SYS command.

commands Instructions to a program that cause an action to be carried out.

common prompt The DOS prompt that is created when you type PROMPT PG and press Enter. The *common prompt* displays the "path to the current directory" followed by the "greater-than sign," for example, **C:\>**. *See* default prompt.

Common User Access *See* CUA.

computer An electronic device that performs complex tasks at high speed and with great accuracy. There are two main parts of a computer—the *processor* and the *memory*. *See also* processor and memory.

CONFIG.SYS An important *batch-like* file that you use to tell DOS how to manage your computer system's hardware and memory. CONFIG.SYS is executed when the computer system starts.

contents An alphabetic list of the Help *topics* available for the application you are using.

contents of current directory (File Manager) A list of the files and subdirectories located within the *directory which is highlighted in the directory tree*. These files and directories are displayed on the right side of the Directory window.

control box (or control-menu box) [ ] The box at the left end of the title bar which opens the control menu. *See also* control menu.

control keys Shift, Ctrl, and Alt Keys used in combination with other keys to issue commands.

control menu The menu found in the small box located at the left end of application windows. The *control menu* holds commands that manipulate the *window*, such as Restore, Move, Size, Maximize, Minimize, and Close. *See also* control box.

conventional memory The first 640K of computer memory.

copy To copy *selected* (highlighted) data in a document into the clipboard. *Copy* leaves the original data intact.

copy files To transfer selected files from one directory to another directory, leaving the original files intact.

copy text To transfer *selected* text from a text file into a buffer, leaving the original text intact.

COPY The DOS command that duplicates a file (or files).

correct a command To use F1 to repeat the previous command—one character at a time—and replace, insert, or delete one or more characters.

CUA - Common User Access A common set of commands used in Windows applications.

current directory The directory you are working in. In the File Manager, the *current directory* is the *highlighted directory*.

current directory The directory you are in.

current drive The drive you are using, also called the *active* drive.

cursor A blinking line (or rectangle if you are in typeover mode) that tells you where the next character you type will be displayed.

cut To move *selected* (highlighted) data from a document into the clipboard. *Cut* removes data from a document.

cutout A portion of the drawing area in Paintbrush which is *defined* by a dashed-line border surrounding it. The *cutout* tools, *pick* and *scissors*, are used to *define* a cutout area. *See also* both scissors and pick.

D

data file A file that consists of data created in a program, such as a *letter* typed into a *word processor*.

date parameters The objects you want DOS to act on in the *DATE command*, that is, the month, day, and year.

DATE The DOS command that displays or changes the computer's date.

default An automatic setting in a program.

default prompt The DOS prompt that is created when you type only the PROMPT command and press Enter; for example, **C>**. *See* common prompt.

DEL (delete) The DOS command that removes files from a disk.

delete files To remove selected files from a disk.

delete text To remove text from a text file without placing it in the *buffer*. You cannot *paste* text that has been deleted.

DELTREE (DOS 6 only) The DOS command that deletes a directory and all the files and subdirectories within it. DOS 5 users must first empty all the files from a directory, and then use the RD (remove directory) command to delete directories.

deselect To *unmark* an item so that a future action will *not* activate the item.

desktop The background (screen) upon which *windows* and *icons* appear.

desktop pattern A small design that is repeated to create a pattern across the desktop.

desktop wallpaper A picture that is repeated to create a wallpaper effect across the desktop. Wallpaper is usually a larger design and is more elaborate than a *desktop pattern*.

destination document The document into which an *object* is placed. *See also* source document.

destination parameter Defines the location to which the data specified by the *source parameter* is to be transferred. A *destination parameter* can consist of a drive letter and colon, a path, a file or group of files, or a combination of drive, path, and file. *See* parameter and source parameter.

dialog box A window or box that appears when a *menu item with an ellipsis (...)* is chosen. A dialog box requests additional information before performing the original command.

digital clock The Windows clock mode that displays a clock with a precise numeric readout, for example, 1:15:30 P.M. *See also* analog clock.

dimmed command A command that cannot be used in the current situation. A *dimmed command* is shown in gray instead of black.

DIR (directory) The DOS command that displays a list of files and/or directories in a directory.

directories, collapse *See* collapse directories.
directories, expand all *See* expand all directories.
directories, expand *See* expand directories.
directories, select *See* select directories.

directory The part of the disk structure that holds the *files* that are saved on a disk. A directory can also hold other directories (also called subdirectories).

directory The part of the disk structure that holds *files* that are saved on a disk. A directory can also hold other directories (called subdirectories).

directory branch A directory and all the levels of directories that are under it.

directory, CD *See* CD (change directory).
directory, current *See* current directory.

directory icon The small picture of a file folder next to a directory name in File Manager.

directory levels The layers of directory levels, starting with the root directory as level one.

directory, MD *See* MD (make directory).
directory, parent *See* parent directory.

directory path A list of the directory and subdirectories, starting with the root directory, that lead to a file. For example, C:\LETTERS\JUNE is the path that shows where files in the JUNE subdirectory are located.

directory, RD *See* RD (remove directory).
directory, root *See* root directory.

directory structure The organization of directories on a disk. Also called *directory tree*.

directory tree A disk's *directory structure* (root directory, directories, and subdirectories) *displayed* on the left side of the *Directory window*.

Directory window A document window within File Manager that displays the *directories*, *subdirectories*, and *files* on your disk. *See also* Directory window title.

Directory window title The *name of the current (highlighted) directory* that is displayed in the title bar of the Directory window.

disk capacity The number of bytes a disk can hold. *See* bytes.

disk, check *See* CHKDSK.

disk density Density refers to the surface coating on a disk. The closer together the particles on the disk are, the higher the disk's capacity.

disk drive A device that transfers information back and forth between the computer's memory and a disk.

disk drive, floppy *See* floppy disk drive.
disk drive, hard *See* hard disk drive.

disk, floppy *See* floppy disk.
disk, hard *See* hard disk.
disk, source *See* source disk.
disk, system *See* system disk.
disk, target *See* target disk.

DISKCOPY The DOS command that copies the contents of a floppy disk (the *source* disk) onto another floppy disk (the *target* disk). *See* bad sectors.

disks Media on which information is stored and retrieved.

display area Where the Calculator shows numbers.

display edit buttons Calculator buttons that let you change numbers in the display area and/or clear a calculation.

document window A window within an application window. There may be more than one *document* window in an *application* window.

DOS (Disk Operating System) System software that links you and your programs to the computer's hardware. **DOS** must be in the computer's memory before *application software* can be used. DOS performs many basic tasks such as disk and file management.

DOS command A command that tells DOS to carry out a specific action such as list files on a disk.

DOS Editor A text-editing program that you can use to create simple documents and batch files. *See* ASCII, batch file, text editor, and unformatted text file.

DOS prompt The signal that DOS uses to let you know that it is ready for you to tell it what to do.

DOS Shell A program that lets you work with files, organize and start programs, and switch between programs.

DOSSHELL The DOS command that starts the DOS Shell program.

double-click A mouse action in which you move the pointer on an item, and then quickly press and release the *left* mouse button *twice*.

double-headed arrow ⇔ The shape the pointer takes when it is used to size a window. *See also* sizing pointer.

drag A mouse action in which you move the pointer on an item, hold down the *left* button, slide the mouse to a new location, and then release the button.

drawing area The workspace in which you create drawings in Paintbrush.

drive, active *See* active drive.
drive, current *See* current drive.
drives, change *See* change drives.

GLOSSARY

drop-down list arrow An arrow in a dialog box that has a line under it, which indicates that it can open a *drop-down list box*.

drop-down list box A box similar to a *list box* except that it usually appears in a small or crowded dialog box and is opened by clicking on the *drop-down list arrow* next to it.

drop-down menu A submenu that *drops down* when a *menu* is chosen from the *menu bar*.

E

ECHO A DOS command used mainly in batch files to turn the command echoing feature on or off, or to display a message.

edit text To insert, replace, cut, copy, paste, and delete text in an application.

EDIT The DOS command that starts the DOS Editor program.

ellipsis *Three dots (...)* that follow menu commands that open a dialog box when *selected*.

embed To *paste* an *object* that was created in a source document into a destination document. *See also* object, server application, client application, source document, destination document, and object embedding.

end mark A small icon that identifies the end of a document in Write.

error message A message that DOS displays on your screen when it does not recognize what you have entered.

executable files Files that do a task (programs files, external DOS commands, or batch files). *Executable files* end with .EXE, .COM, or .BAT. *See* batch files, external DOS command, program files, and search path.

expand directories To display unseen directory levels in the directory tree. *See also* collapse directories.

extended memory General purpose memory above *conventional* and *upper* memory.

external DOS command A DOS command that is stored in a file and that is accessible only if it can be reached on the disk and directory on which it is stored. *See* internal DOS commands.

F

FASTHELP (DOS 6 only) The DOS command that provides *fast* information about DOS commands.

file A *collection of data* that is given a *filename* and stored on a disk.

file, .DAT *See* .DAT file.
file, application *See* application file.
file, associated *See* associated file.
file, batch *See* batch file.
file, data *See* data file.
file, overwrite *See* overwrite file.
file, program *See* program file.
file, program *See* application file.

file type The filename extension. It is often used to organize files into groups. Also, *kinds* of files that can be shown on the right side of the *Directory window*—directory, program, document, and other.

File Manager A program to help you control your files.

File Manager window The application window that holds the File Manager program and one or more directory windows (document windows).

filename The name you assign to a *set of data* (file) that you save on a disk. The name may have up to eight characters and may include an extension (a period followed by up to the three characters), for example, LETTER.WRI.

filename extension The optional *period and up to three characters* at the end of a *filename*. A *filename extension* is often used to identify *groups* of related files and is automatically added by some Windows applications.

filename pattern A combination of *characters* and *wildcards* that represents a group of files.

files, executable *See* executable files.
files, hidden *See* hidden files.
files, hidden system *See* hidden system files.
files, organize *See* organize files.
files, transfer *See* transfer files.

find files (DIR/S) To locate files when you know the filename but do not know what directory they are in.

find text To search for specific text in a text file when using an application.

firmware *System software* that is built into the computer system on ROM chips. *See* read-only memory (ROM).

floppy disks Magnetically coated disks on which information (both programs and data typed from the keyboard) can be stored and retrieved. *Floppy disks* are inserted into and removed from the *floppy disk drive*.

floppy disk drive The part of the computer system that transfers files back and forth between the computer's memory and floppy disks (usually Drive A: or Drive B:).

floppy disk size Floppy disks come in two sizes: 3½" and 5¼".

font The complete set of characters in a given *size*, *type style*, and *typeface*.

font sample box A box in the *Font* dialog window that shows a *sample* of the selected *font* in the selected *type style* and the selected *size*.

foreground color or pattern The color or pattern used by the *tools* to draw with and fill areas in Paintbrush.

FORMAT The DOS command that prepares a disk for use by the computer.

four small command parts Space, colon, slash, and backslash. *See* three main command parts.

function keys Twelve (or ten) special keys labeled F1, F2, etc., and located across the top (or at the left side) of the keyboard. *Function keys* are used to issue commands.

G

glossary A Help feature that provides a list of Windows terms from which you *choose* a term to display its definition.

graphical user interface or **GUI** (pronounced "gooey") A phrase that is commonly used to describe Microsoft Windows and similar programs. It simply means that Windows has *pictures* (graphical) that *you use* (user) to *communicate* (interface) with the computer.

group window A *document window* within the Program Manager that holds *groups* of program-item icons that represent commands to *start* programs.

group window icons Icons at the bottom of the Program Manager window which represent *group windows*.

GUI *See* graphical user interface.

H

hand pointer The pointer shape that appears when you can jump between related Help topics. *See also* jump.

hard disk A large-capacity storage area that is built in to your computer and offers fast storage and retrieval. Also called fixed disk.

hard disk drive The part of the computer system that transfers files back and forth between the computer and the hard disk (usually Drive C:).

hardware The physical parts of your computer system—processor, memory, disks, disk drives, keyboard, monitor, etc. Hardware can be seen and touched.

Help A quick, easy way to look up information about Windows tasks, features, and commands.

Help, about application *See* about (application).
Help, contents *See* contents.
Help, glossary *See* glossary.
Help, print topic *See* print topic.
Help, search *See* search for Help on.

Help, Windows tutorial *See* Windows tutorial.

HELP (DOS 5) The DOS command that provides information about DOS commands.

HELP (DOS 6) The DOS command that starts the Help program that provides in-depth help with DOS commands.

GLOSSARY

Help window buttons Buttons that are displayed below the *menu bar* in a Help window.

hidden files Files that are given the "hidden" attribute. The DOS attribute command, ATTRIB, is not covered in this book.

hidden system files *System files* that DOS puts on a *system disk* when you use the SYS command. You cannot see or access them, but they are there and they take up space. DOS 5 puts *hidden system files* at the beginning of the disk and will bump files that are stored at the beginning to a new location.

highlight To indicate that an object or text is *selected* and that it will be affected by your next action. *Highlighting* reverses the color on text (also called reverse video).

History A Help feature that displays a sequential list of every Help topic you have chosen during the current Help session.

hourglass ⌛ An icon that signals you to wait while Windows processes data.

How to Use Help Information about how to *use* the Help feature.

I

I-beam pointer I The pointer shape in Write's work area. Click the I-beam in the desired location to move the *insertion point* to that spot.

icon A small picture that represents an element such as a document, disk, program, group of programs, command, or the pointer.

inactive command A command that cannot be used in the *current* situation.

increment box A box in a dialog box used to set a value by providing an up and a down arrow, which, when clicked on, changes the original value. A new value can also be *typed* in.

insert text An editing mode that inserts the text you type at the cursor position so that existing text is moved to the right and down.

insertion point A blinking vertical line that shows where text will appear when you type.

integration 1) A software system in which *information* can be easily *transferred* back and forth between different programs, and/or 2) a software system in which different programs look and behave alike, thus reducing the time it takes to learn a new program.

internal DOS commands DOS commands that are stored in a file called COMMAND.COM and automatically loaded into the computer's memory. Because they reside in memory, you can execute internal commands at any time.

J

jump A jump is made from a Help topic that has a link to another related Help topic, or to more information about the current topic. Topics that provide a *jump* opportunity are marked with a *dotted underline* or a *different color*.

K

keyboard A device that is used to enter data into and issue commands to the computer.

kilobyte A unit of memory that holds about 1,000 characters.

L

LABEL The DOS command that creates, changes, or removes a disk's name (volume label).

levels *See* directory levels.

linesize box (Paintbrush) The box in the bottom left corner of the Paintbrush window that displays lines of varying width from which a drawing width can be selected.

link An active connection between an *object* and the different programs into which that *object* is embedded. *See also* server application, client application, object, embed, and object linking.

list box A box that displays a list of options from which to choose.

M

margins The white space that creates a border around the body of data on a page.

major version changes When a company makes *major* changes (upgrade) to a program, they change the *whole number* part of the version number. *See* minor version changes, VER, and version.

maximize button The small box located at the right end of the title bar and used to enlarge a window to its maximum size.

MD (make directory) The DOS command that creates a directory.

megabyte A unit of memory that holds about 1,000,000 characters.

memory The area of the computer that holds instructions (programs) and information you give it. When the computer is turned off, everything in the memory disappears. *Memory size* is measured in bytes. *Memory* is also called random access memory (RAM) or main memory.

memory managing programs Programs that organize the computer's memory to prevent different programs from using the same memory at the same time.

menu A list of commands from which you may *choose* a command.

menu bar The second horizontal bar (located under the title bar) in an *application* window. The *menu bar* displays the first-level *menu items* for the application it is in.

menu command The options that appear in drop-down menus.

microprocessor chip The computer's processor that identifies a computer. Standard microprocessing chips are 80286, 80386, and 80486. The higher the chip number, the faster the computer's processor.

Microsoft Windows A special kind of *software* that provides a *graphics environment*, that is, *an icon-based* ***link*** between you, application software, and DOS.

minimize button The small box located toward the right of the title bar (just to the left of the maximize button) and used to reduce a window to an icon.

minor version changes When a company makes *minor* changes (revision) to a program, they change the *decimal* part of the version number. *See* major version changes, VER, and version.

monitor A screen that displays the information in the computer. Also called display screen and video display terminal (VDT).

MORE The "pipe" command which displays one screenful of output at a time. *See* pipe.

mouse A small, hand-held device used to control a pointer on the screen.

MOVE The DOS command that moves files from one directory to another directory or renames directories. This feature is available only in DOS 6.

move files To transfer selected files from one directory to another directory, deleting the original files.

move pointer The pointer shape used to relocate windows when you use the keyboard instead of the mouse.

multitasking The ability to run more than one program at once.

N

New The *File* option that clears the screen (i.e., opens a *new* workspace).

O

object A selected *set of information* created in a Windows application, such as a *drawing* in Paintbrush. An object can be *embedded in* or *linked to* certain other applications.

object embedding A way to copy an *object* from a *source program* (for example, Paintbrush) into a *destination program* (for example, Write) so that it can be edited directly from the *destination program* (for example, you can edit a drawing from the word processor).

object linking Connecting an *object* that has been copied from a *source document* and **embedded** in one or more *destination documents* so that when the *object* is *edited* in one document, all the other documents are also *edited*.

GLOSSARY

Object Linking and Embedding *See* OLE.

OLE - Object Linking and Embedding A powerful way of integrating developed for Microsoft Windows.

option buttons ◯ Circles in a dialog box from which you may select *only one of a related group*. A dot in the circle ◉ means an option button is selected.

organize files To use filenames, filename extensions, and directories to arrange your files.

output The *results* of your DOS command, normally displayed on the screen.

overwrite a file To replace the contents of one file with the contents of another file.

P

palette The box across the bottom of the Paintbrush window that displays colors and patterns that may be selected for background or drawing.

parameter, destination *See* destination parameter.
parameter, source *See* source parameter.
parameters, date *See* date parameters.

parameters Parameters define the object you want DOS to act on, usually: a disk drive, a directory, a file or group of files, or a combination of the above.

parameters, time *See* time parameters.

parent directory The directory immediately above the *current* directory (or immediately above any particular subdirectory). *See* subdirectory.

paste To copy the data in the Clipboard into a document. *Paste* leaves the original data in the Clipboard so it can be pasted again (until you cut or copy other data).

path The list of directories that DOS goes through to find a directory or file.

PATH The DOS command that sets a search path for executable files.

pattern *See* desktop pattern.

PAUSE A DOS command used in batch files to temporarily stop a batch file and prompt the user to press any key to continue.

pick A Paintbrush tool used to define a *rectangular* cutout area. *See also* both scissors and cutout.

pipe The process in which the *output* of one command (or program) becomes the *input* for another command (or program). *See* MORE.

pixel A single dot that represents the smallest graphic unit that can be displayed on the screen.

pointer (or mouse pointer) The arrow-shaped cursor on the screen that moves with the mouse as you slide the mouse over a flat surface. The pointer's shape may change depending on the job it is doing.

prevent pointer ⃠ The pointer shape that indicates that you *cannot* perform an action.

print topic A Help feature that lets you print a Help topic.

printer A hardware device that transfers information from the computer to paper.

PRN DOS's name for the printer, it is used, along with the redirect symbol (>), to redirect the computer's output to the printer. *See* redirect output to the printer.

processor The "brains" of the computer—it processes *instructions* in the computer's *memory*. The 286, 386, and 486 chips are all *processors*. Also called the central processing unit (CPU) or microprocessor chip.

program (application) A set of instructions that your computer carries out to perform a specific task, such as word processing. Programs are saved as files with filename extensions of .EXE (executable files), .BAT (batch files), or .COM (command files).

program file A file that holds a *set of instructions* that perform a task, such as word processing or database management.

program icon *See* program-item icon.

program-item icon An icon that represents a program that can be started from a *group window*.

program items The programs (and documents) that make up a *group* in the Program Manager. *Program items* are represented as *icons* in Group windows.

Program Manager A menu-like program that lets you *start* applications and organize applications and tasks into *groups*.

prompt, access DOS *See* access the DOS prompt.
prompt, active DOS *See* active DOS prompt.
prompt, common *See* common prompt.
prompt, default *See* default prompt.
prompt, DOS *See* DOS prompt.

PROMPT The DOS command that changes the appearance of the DOS prompt.

R

RD (remove directory) The DOS command that deletes a directory.

read-only memory (ROM) A chip that holds information that cannot be changed. *See* firmware.

redirect output to the printer To use a code to tell DOS to send the *output* of your command to the *printer* rather than the *screen*. *See* PRN.

redirect To change (redirect) the place a command *gets information from* or *sends information to*.

REM (remark) A *batch file* command that lets you add a comment to a batch file without affecting the way the batch file runs. You can also use REM to temporarily disable a command in a batch file.

REN (rename) The DOS command that changes a file's name.

repeat a command To use F3 to quickly reproduce the previous DOS command.

restore button The small box located at the right end of the title bar of a maximized window and used to return a window to its previous size.

root directory The original (or highest-level) directory on a disk. For example, **C:** is the root directory on most hard disks.

run a program To load a program into the computer's memory and start it.

S

sample box *See* font sample box.

sample color scheme area An area in the *Color* window that contains sample Windows elements which change to match the highlighted *color scheme*.

Save The file option that saves changes to a previously named file that you are working on.

Save As... The file option that saves new files or lets you *rename* a previously saved file.

scissors A Paintbrush tool used to define an *irregular* cutout area. *See also* both pick and cutout.

screen *See* monitor.

scroll arrow The arrow at each end of a scroll bar, used to *scroll* through the contents of the window.

scroll bar A *bar* that may appear at the right and/or bottom edge of a window (or right edge of a list box) that allows you to scroll the window (or list box) when its contents are not fully visible. Each *scroll bar* contains two *scroll arrows* and a *scroll box*. *See* scroll arrow and scroll box.

scroll box The small box in a scroll bar that shows the position of the information *displayed* in relation to the *entire contents* of the window.

scrolling The vertical movement of files on the screen.

Search for Help On A Help feature that displays a dialog box used to locate information about a specific topic.

search path A list of directories set by the PATH command that DOS looks through to find an *executable* file. *See* executable file.

select text To use the keyboard or mouse to highlight text in an application. *See* highlight.

select To *mark* an item so that a subsequent action can activate it. *Highlighting* and *a check mark* are two ways to *select* an item. (Contrast with *choose*.)

serial number A number that DOS assigns to a disk when it is formatted. The serial number cannot be changed unless you reformat the disk.

server application An application that *creates* objects that can be embedded or linked into other documents. *See also* client application.

shortcut keys Easy-to-use key combinations that activate certain commands instead of using menus. If a menu option has a *shortcut*, the key combination is shown to the right of the command on the drop-down menu.

size of fonts The *size* of fonts is usually measured either in points or characters per inch. When using the point system, the *height* of characters is measured in points. One point is 1/72 of an inch. The larger the point size, the larger the font. Some fonts are measured in *characters per inch (CPI)*, that is, the number of characters that fit in a horizontal inch. The larger the number of characters per inch, the smaller the font.

sizing pointer ⇔ The shape the pointer takes when it contacts window borders and corners. The *sizing* pointer is used to change a *window's* size.

software Instructions that tell your computer how to perform a task. Software is stored on disks in program files. Software cannot be seen or touched. There are two main kinds of software, *application software* and *system software*. *See* application software and system software.

source disk The disk to copy from when doing a DISKCOPY. *See* target disk.

source document The document in which an *object* is created. *See also* destination document and object.

source parameter Defines the location of data to be transferred to a specified *destination*. A *source parameter* can consist of a drive letter and colon, a path, a file or group of files, or a combination of drive, path, and file. *See* parameters and destination parameter.

standard mode The only mode Windows runs in if you have a 286 processor with 640K of conventional memory plus no more than 256K of extended memory. Standard mode lets you switch between non-Windows programs, but it does not access virtual memory or let non-Windows programs run in the background or within a window. *See also* 386 enhanced mode.

startup group window A special group window that has been designed so that *the program items* that appear in it *start* when you start Windows.

status bar (File Manager) The bar at the bottom of the File Manager window that displays information about the *current* drive and directory.

subdirectory 🗀 A directory that is within another directory.

subdirectory switch (/S) A switch used with the DIR command that tells DOS to look not only in the *current directory*, but in every directory *under* the *current directory* when it lists files. If you are in the *root directory*, DOS will search in every directory on the disk.

switch An optional code at the end of a command that directs the command to vary its task in a specific way.

switch option An optional code at the end of a *switch* that begins with a colon (:) and provides information that changes a *switch* in a specific way.

syntax The *language* of DOS commands.

SYS The DOS command that copies DOS system files and COMMAND.COM to a disk you specify, making the disk a system (bootable) disk.

system disk A disk that contains the *system* files needed to start up or *boot* the computer. Also, bootable disk.

system software Programs that run the computer system. System software communicates between the parts that make up the computer system, making it possible for you to operate the computer. Two types of *system software* are *firmware* and *DOS*.

T

target disk The disk to copy to when doing a DISKCOPY. *See* source disk.

text box A box in a dialog box that provides space to type the information needed to carry out a command.

text editor A program that operates in *ASCII file format* and that you use to create and edit *unformatted text files*. *See* ASCII and unformatted text files.

three main command parts Command name, parameters, and switches.

tile To resize and arrange the open group windows *side by side* within the Program Manager workspace.

time parameters The objects you want DOS to act on in the *TIME command*, that is, the hour, minutes, seconds, hundredths of a second, and AM or PM.

TIME The DOS command that displays or changes the computer's time.

title bar The horizontal bar at the top of a window that holds the window's name.

toolbox An area along the left side of the Paintbrush drawing area that holds tools used to create drawings.

tools (Paintbrush) Various tools found in the toolbox (along the left side of the Paintbrush window) that are used to create a drawing.

transfer files To move files from one directory to another directory and remove the files from the original directory. DOS 6 users can use the MOVE command to transfer files, while DOS 5 users must first COPY and then DELete files.

TREE The DOS command that displays the directory structure of a disk.

tutorial *See* Windows tutorial.

TYPE The DOS command that displays the contents of a file.

type style The treatment of characters, for example, *bold*, *italic*, and *underline*.

typeface The design of characters.

U

UNDELETE The DOS command that restores files that have been deleted.

unformatted text files Files that contain only ASCII text characters (letters, numbers, and symbols) and a few codes such as a *carriage return*. Unformatted files do not contain formatting codes such as *underline* or *bold*. *See* ASCII and text editor.

upper memory Additional memory (up to 384K) above the 640K of conventional memory that is normally reserved for running the computer's hardware.

V

VER (version) The DOS command that displays DOS's name and version number.

verify switch (/v) An optional addition to the DISKCOPY command that tells DOS to compare the source and target disks during the copy.

version The numbering plan that identifies software revisions and upgrades. Version numbers have two parts: a whole number and a decimal. *See* major version change and minor version change.

volume The term used by DOS to represent a disk when giving it a name (label).

VOL (volume) The DOS command that displays the disk's volume label (if it exists) and serial number.

volume label A name you assign to a disk.

W

wallpaper *See* desktop wallpaper.

warm boot The process of *restarting* the computer by simultaneously pressing Ctrl, Alt, and Del instead of using the on/off switch.

wildcards Symbols that stand for *any* single character (?) or *any* group of consecutive characters (*) in a DOS command.

window The rectangular work area for a task, program, document, or group. There are several kinds of windows: application, document, group, and dialog.

window, active *See* active window.
window, application *See* application window.
window, Directory *See* Directory window.
window, document *See* document window.
window, group *See* group window.

window borders and **corners** Boundaries that mark the edges of a window and are used to *size* a window.

Windows tutorial Hands-on lessons in two areas: 1) How to use the mouse, and 2) Windows Basics.

Windows, Microsoft *See* Microsoft Windows.

workspace The inner part of a window, where the work on an application is done.

Write Windows' word processor. Write uses many Windows features, such as a similar menu bar, dialog boxes, file commands, and window control elements.

write-protect To use a procedure that will protect a disk from being changed in any way while still allowing you to read the information on the disk.

write-protect tab A small, self-adhesive tab that often comes packaged with disk labels and is used to cover the write-enable notch on a 5¼" floppy disk.

X

XCOPY The DOS command that copies all the files (except hidden and system files) in a directory or in an entire directory branch.

Y

you (user) The controller of the computer system (its software and hardware).

.BAT filename extension 93
.COM filename extension 93
.EXE filename extension 93

A

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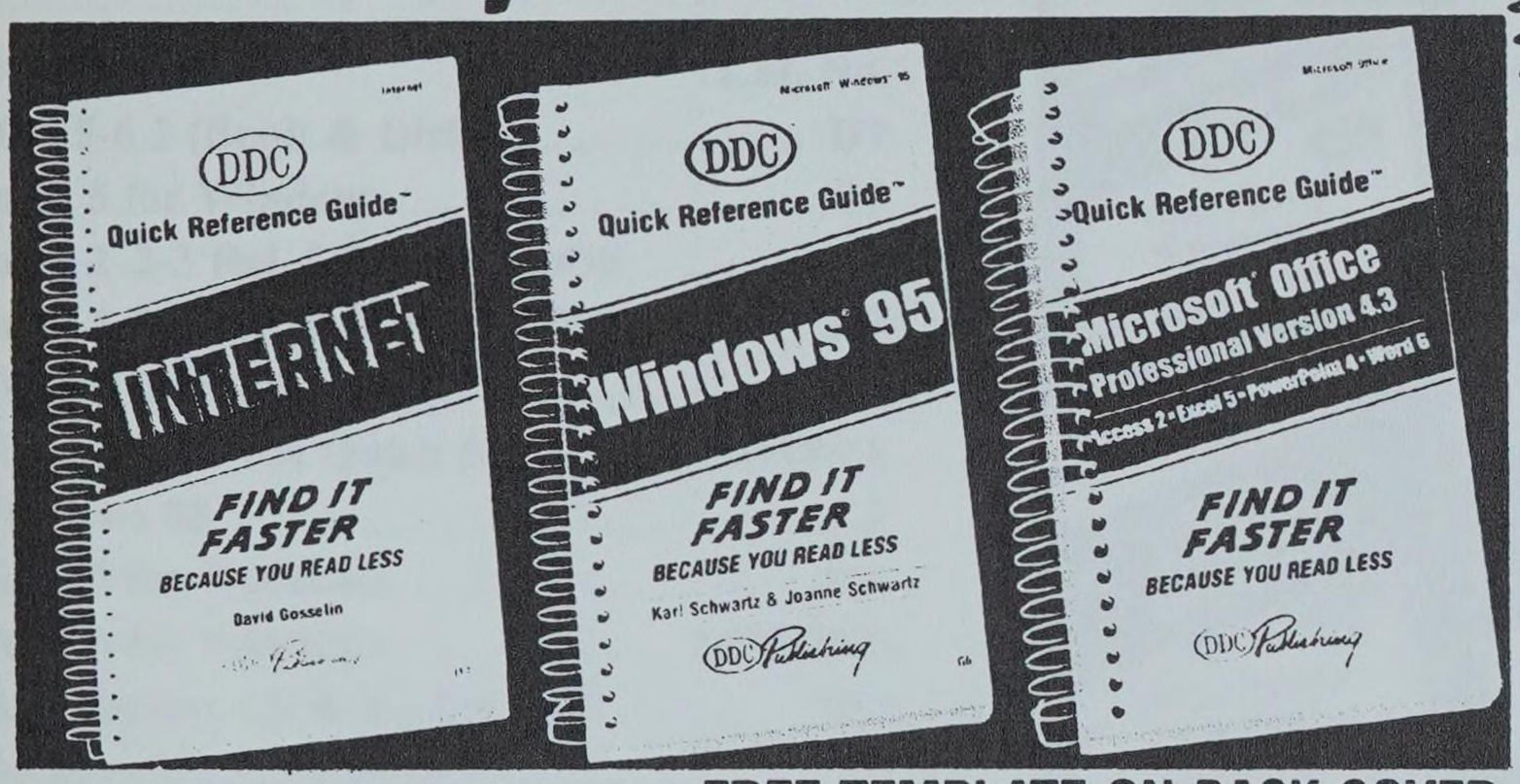

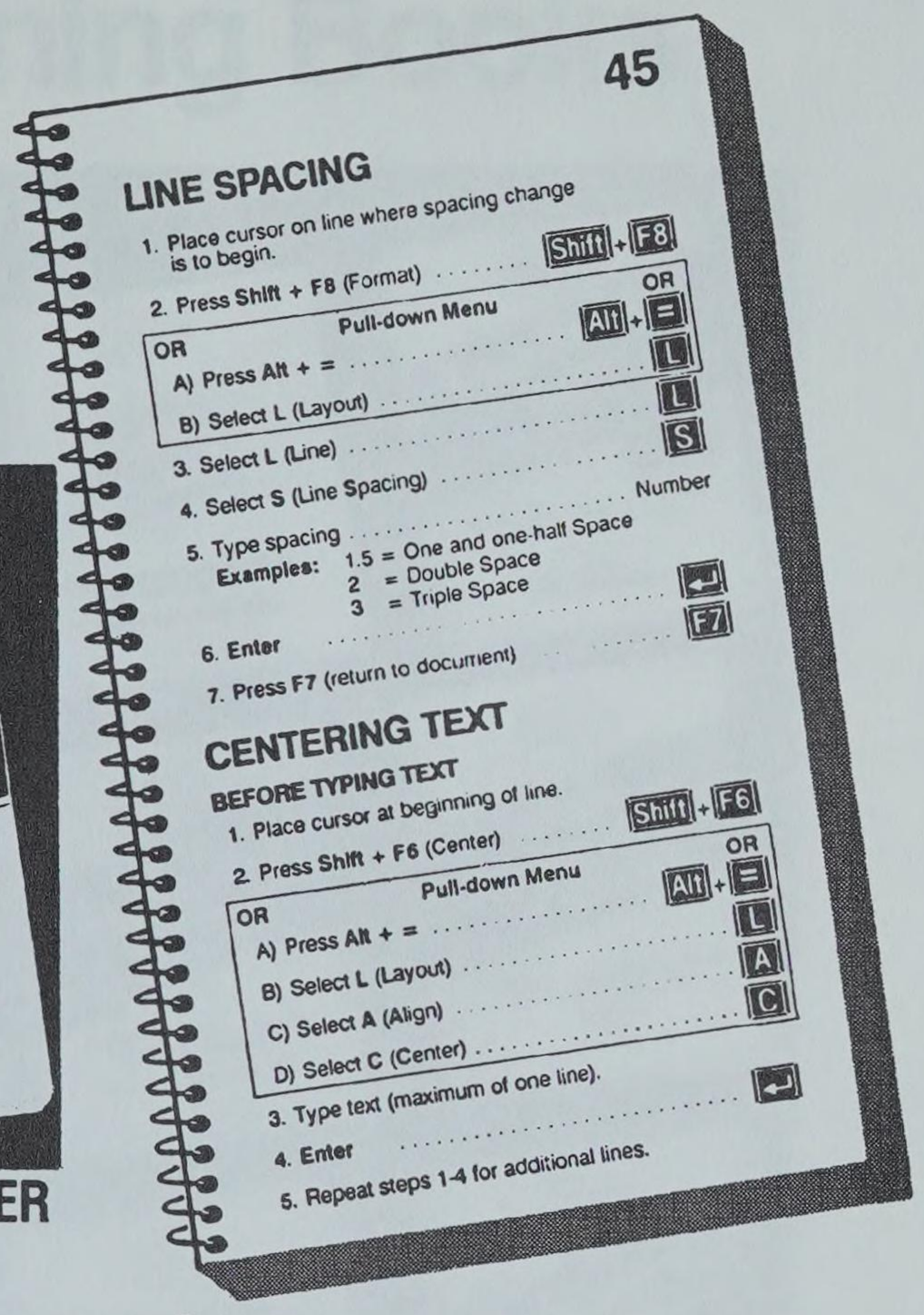

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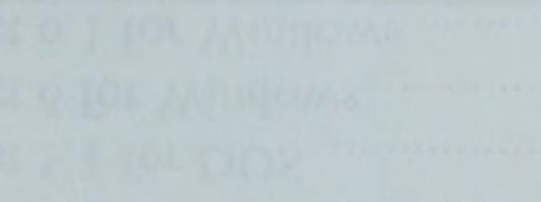

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DOS keyboard commands

To:	keyboard command	To:	keyboard command
Repeat last command	F3	Pause a DOS command (scroll)	Ctrl + S
Repeat last command one character at a time	F1	Warm boot computer (restart computer)	Ctrl + Alt + Del
Delete character curson is on	Del	Toggle CAPS on/off	Caps Lock
Delete character to the left	Backspace	Toggle keyboard between number and cursor movement keys	Num Lock
Stop a DOS command	Ctrl + C	Print contents of screen	PrtSc or Shift + PrtSc

Working with application and document windows in Windows 3.1

To:	application window		document window	
Select	• Double-click ..... *desktop* • Click ..... *application name*	Alt + Tab	• Click ..... Window menu • Click .... *document name*	Ctrl + Tab
Switch to	• Double-click ..... *desktop* • Click ..... *application name*	Ctrl + Esc	• Click ..... Window menu • Click .... *document name*	Alt + W
Tile (side by side order)	• Double-click ..... *desktop* • Click ..... Tile	Ctrl + Esc, Alt + T	• Click ..... Window menu • Click ..... Tile	Alt + W, T
Cascade (overlapping order)	• Double-click ..... *desktop* • Click ..... Cascade	Ctrl + Esc, Alt + C	• Click ..... Window menu • Click ..... Cascade	Alt + W, C
Open Control-menu	• Click ..... -	Alt + Space	• Click ..... -	Alt + -

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